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# **REDI WHEAT**

## **A NEW CANNED COOKED BULGUR**

*Market Position and Consumer  
Acceptance in Wichita, Kansas*

Marketing Research Report No. 574



## PREFACE

A primary objective of the cooperative research reported here was to provide producers, processors, and others with facts concerning the market possibilities of a new product.

The study is a cooperative research effort of the Economic Research Service and the Statistical Reporting Service of the U. S. Department of Agriculture. The study was conducted under the general supervision of Marshall E. Miller and Philip B. Dwoskin, Market Potentials Branch, Economic Research Service, and of Trienah Meyers, Special Surveys Branch, Statistical Reporting Service.

The Market Potentials Branch assumed responsibility for coordinating all phases of the market test, for conducting the research, analyzing the data, and publishing the final results. Denis F. Dunham, Frederick D. Gray, and Norman L. Rollag supervised the sales audits of retail food stores.

The Market Surveys Branch conducted the consumer survey and defined the characteristics for the test product that consumers demand. Pauline Kartalos and Edward M. Knott supervised the household survey interviewing.

The Western Utilization Research and Development Division of the Agricultural Research Service, developers of the product, provided technical assistance to the packer to assure quality control of the test product, and prepared recipes and instructions for use. James W. Pence, Robert E. Ferrell, and Mrs. Marjorie Heid provided consultation service in all phases of the market test.

The following organizations in Kansas cooperated in this market test study: The Kansas Wheat Commission helped in the project planning, assisted in the field phase of the project, extended the services of their public relations and advertising agency, the High Plains Publishers, for preparing the advertising and promotion materials, and provided the funds for the advertising and promotion campaign in the market test area. Thanks are expressed to Walter W. Graber, Gerald C. Fowler, Mrs. Pat Talbott, Joe Berkely, and Ray Pierce for the many services performed as cooperators in the study.

The Kansas Association of Wheat Growers provided the funds and facilities for packaging and distributing the test product in the test area, and for designing and labeling the packages.

The Kansas State Board of Agriculture helped plan the project and provided the services of market specialists who worked directly with wholesale and retail operators in distributing the test product and acted as coordinator in arranging for the in-store demonstration phase of the test. W. J. Petr and Harold A. Ray deserve particular thanks for their contribution.

The Trenton Foods, Inc., provided an adequate supply of the test product for the test.

Dan Coffey, broker, Coffey-Sylvester Co., Wichita, kept all stores in the area supplied with the test product as needed for demonstration and regular sales.

Sincere appreciation is extended to retail food store management, both chain and independent, in the Wichita, Kans., area for the successful conduct of this test.

Thanks are expressed to distributors, restaurants, and Wichita news media, and to many individuals, especially in-store demonstrators, audit enumerators, household interviewers, and other individuals who helped in this work.

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## SUMMARY

A new process for cooking and canning debranned whole kernel wheat provides a versatile, easy-to-prepare, convenient form of cooked wheat. This new product may be used as a side dish or as a vegetable, or may be used as a convenient ingredient in a wide variety of main course dishes, soups, desserts, and salads. This food innovation, developed by the Agricultural Research Service of the United States Department of Agriculture, is described in U. S. Patent 2,929,725, issued March 25, 1960.

A market test of this new form of canned wheat, prepared from debranned hard red winter wheat, was undertaken at Wichita, Kans., in March-September 1961, to ascertain its market position and consumer acceptance.

Sales of "Redi Wheat," the name given to the market test product, averaged 56 cans, or 2.34 cases per store per week for all 39 stores handling the product during the first phase of the market test, a 10-week period. Sales were influenced by an introductory 4-week promotion including demonstration and special display. Stores that used these promotional devices averaged somewhat higher sales than the rate reported for all 39 stores. Some carryover effect was observed for these stores following the promotions.

The test product attained a favorable sales position relative to the sales for 57 well-established products audited in categories of canned Spanish rice, dry rice specialties, quick-cooking rice, dry rice, wild rice, dry spaghetti and macaroni complete dinners, canned spaghetti and macaroni products, canned specialty bean products, and dry bulgur. The average rate of sale for the 57 commercially established products audited during the pretest week and the 10-week market test period showed that approximately 60 percent of the products sold less than 1/5 case per store; 87.7 percent of the products sold less than 3/5 case per store; and only 7 percent of the products sold 4/5 case or more per store.

About 2 weeks after the completion of the various promotional activities which introduced Redi Wheat, a household survey was conducted of every 30th residential telephone subscriber in the Wichita area. The survey was designed to determine whether or not homemakers were aware that Redi Wheat was being offered for sale in the Wichita market; if they were, whether or not they had purchased the test product, and if they had, what their opinions of it were.

The survey showed that about 74 percent of the homemakers in the area were aware that Redi Wheat was being sold in local stores and that among all the homemakers in the basic sample, 18 percent had bought the test product one or more times. Two months after the original household survey, a follow-up survey was made. It revealed that 9 percent of the housewives in the area purchased the product during this latter period. About half of these purchases were by new buyers, the other half being repeat purchases.

A majority of the homemakers who had tried the new product indicated they would continue to use Redi Wheat. They particularly liked the health value, taste, and variety of uses of the Redi Wheat as an ingredient in a wide range of recipes. Most opposition to the product was expressed in terms of its need for more cooking and moisture before being used in recipes. Research was directed to both a whole kernel product and a cracked kernel product. Although the whole kernel product was selected for this market test, it is possible that the cracked kernel may be preferred when the product is used as an ingredient, particularly where a high degree of ingredient blending is desired.

To allow for a more realistic appraisal of the commercial potential of Redi Wheat, sales were audited for 20 weeks after the initial 10-week period. During this period sales averaged 7 cans per store per week. Even at this sales level, the test product ranked better than 6 out of 10 of the 57 items audited during the first 10-week period.

The research methods of weekly sales audits used in this study, as well as findings from a follow-up consumer survey, enabled researchers to compare accurately the sales rate of the new product with that of well-established products. While sales were not as high as hoped for, this new wheat food has some real pluses. It is a product of excellent wholesomeness with some new convenience features, and it can be considered a good food buy on a cost and price basis with other prepared foods. When compared with the market tests of two other comparable new foods (Potato Flakes and Insta Rice), the results of the household survey indicate that Redi Wheat might have a favorable market position. The results suggest some caution, however, as the number of repeat purchases tended to be somewhat smaller than for the other foods.



# REDI WHEAT -- A NEW CANNED COOKED BULGUR

Market Position and Consumer Acceptance in Wichita, Kansas

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## INTRODUCTION

### Background

The general purpose of this research was to assess the market potential for a new food product -- bulgur -- a canned cooked whole grain wheat (table 1).

The need for wheat product innovations arises from the fact that for the past several decades the per capita rate of wheat consumption has declined. Rising incomes in the past two decades have enabled consumers to afford high resource-using goods such as meats, frozen fruits, and processed vegetables. At the same time, wheat supplies have increased. The average supply of wheat for the 5 years ending 1961-62 was 2,396 million bushels, almost 2-1/2 times the prewar 1936-40 average of 985 million. The total supply of wheat for the marketing year which began July 1, 1962, is estimated at 2,409 million bushels of which 594 million bushels is expected to be used domestically and 620 million bushels to be exported. Even though the estimated 1962-63 supply of 2,409 million bushels is below the 1960 alltime record, it represents about a 2 years' supply for domestic use and exports. 1/

About 80 percent of the estimated 1,195-million-bushel carryover of wheat on July 1, 1962, is hard red winter wheat. This is the class of wheat used to produce the new wheat food product, Redi Wheat, that is market tested in this study.

A year after Redi Wheat was first introduced into the test market, it was still being carried by stores in Wichita. In addition, the product was being sold through out Kansas, and in Missouri and Colorado. The development and market testing of the product has stimulated interest in the use of wheat as bulgur. The Federal Government has awarded contracts for the processing of CCC-owned wheat into bulgur for distribution abroad.

### Bulgur (Redi Wheat) Process

Development work on the canned whole kernel wheat bulgur was conducted in 1960 by USDA's Western Utilization Research and Development Division at Albany, Calif. The innovation is described in U. S. Patent 2,929,725 issued March 25, 1960. The product was a further result of efforts to develop a dry cracked wheat bulgur

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1/ U. S. Department of Agriculture, Economic Research Service. The Wheat Situation. WS-179, June 1962.

Table 1.--Analysis of Redi Wheat as it comes from the can 1/

Item	Seasoned <u>2/</u>	Unseasoned <u>3/</u>
	<u>Percent</u>	<u>Percent</u>
Moisture.....	54.30	57.40
Protein (N x 5.7).....	6.15	6.04
Fat.....	3.03	.74
Crude fiber.....	.70	.73
Ash.....	2.04	1.96
Carbohydrate (by difference).....	33.78	33.13
Total.....	100.0	100.0
Calories per pound.....	917	805

1/ Field Crops Laboratory, Western Utilization Research and Development Division, Agricultural Research Service, U. S. Department of Agriculture.

2/ Processed, debranned, whole kernel wheat with chicken fat, chicken stock base, dehydrated onion flakes, salt, monasodium glutamate, and herbs.

3/ Processed, debranned, whole kernel wheat with salt added.

to convert part of our wheat supplies into a staple food acceptable for export. Traditionally, bulgur has been regarded as the nutritional equivalent of whole wheat but more stable and resistant to attack by insects and vermin.

The Western Division was primarily interested in developing a new wheat food product that would be an acceptable convenience food in today's market.

Precooked canned whole-kernel wheat bulgur is a product of high quality, low in fat and calories (table 1). Its bland flavor makes it versatile. It can be combined with other foods as an ingredient or, with seasonings, used as a side dish. As a bland ingredient, it assumes the flavor of the predominant ingredient in a recipe. Its versatility is demonstrated by the wide range of recipe applications -- with soups, casseroles, Spanish bulgur, Boston baked bulgur, Swedish cabbage rolls, stuffed green peppers, roast fowl with bulgur stuffing, curried lamb pilaf, Swedish meat balls, bulgur pecan whip, and bulgur pineapple bavarian, among others.

A test of bulgur was undertaken to determine its acceptance under actual market conditions.

## TEST METHODS

### Selection and Characteristics of the Market Test City

The test was conducted in Wichita, Kans., which has, according to the 1960 census, a population of 254,698 within the corporate limits and 343,231 within the whole metropolitan area comprising Sedgwick County. Wichita's metropolitan population increased 54 percent between 1950 and 1960.

Wichita, the largest city in Kansas, is located in south-central Kansas, 149 miles southeast of the geographical center of the 48 States. It is isolated from the advertising media of other metropolitan areas: 517 miles from Denver, 316 miles from Omaha, 220 miles from Kansas City, and 173 miles from Oklahoma City. Isolation of a test city is important because it allows more precise measurement of the test results relative to the funds available for promotion.

According to the Kansas Department of Labor, employment in the metropolitan area reached a peak of 130,500 in 1957 and by May 1961 had fallen to 116,100. A decrease of 1.78 percent occurred in total employment between May 1960 and May 1961. Employment in manufacturing in May 1961 (41,350) accounted for 35.6 percent of the total labor force; a year earlier 37.7 percent of the total labor force was engaged in manufacturing. Women constituted 35 percent of the civilian labor force in Wichita at the end of 1960.

Previous experience in market testing indicated that it is advantageous to confine activities for the most part to the large supermarkets. This was particularly true in the Wichita area, since the large supermarkets, chain and independent, are estimated by the Wichita Eagle and Beacon to account for about 85 percent of the retail food sales in the area. There are approximately 300 retail food stores in the Wichita area of which 79 are considered to be large supermarkets. These 79 large supermarkets are affiliated as follows: 28 with large national and regional chains, 13 with local chains, and 38 with large cooperative buying groups. Selection of 39 supermarkets for audit out of the total of 79 was made on a random sample basis by chain. Approximately half of the supermarkets operated by each group were selected. The geographical dispersion within the metropolitan test area is shown in figure 1.

#### Retail Store Audit

In the retail store audit, enumerators made an inventory of Redi Wheat cans and of 57 selected products at the beginning of the test and each week during the test. The count included the quantities on display in the public area of the store and also the quantities in the storage area awaiting movement to the public area (fig. 2). Sales for each week were obtained by adding deliveries to the beginning inventory, adding or subtracting store transfers in or out, and subtracting the ending inventory ( appendix A, page 34).

The first phase of the market test was for a 10-week period (March 2-May 10, 1961) during which an audit was made for the test product, Redi Wheat canned bulgur, and 57 established prepared foods consisting of rice items, prepared spaghetti and macaroni dry and canned dinners, ready-to-eat canned beans, and dry bulgur. To appraise sales of the test product over a longer period, the 10-week period was followed by a second phase of 6 weeks (May 11-June 21, 1961) during which the sales audit included the test product and 11 of the 57 products consisting of rice items, ready-to-eat canned beans, and dry bulgur. This 6-week audit period was followed by an audit on the test product alone during a third phase of 14 weeks (June 22-September 27, 1961). 2/ All of the cooperating supermarkets furnished data for all the periods.

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2/ This was the first USDA market test in which a sufficient quantity of the test product was available for an appraisal of the market action over an extended period of time. A commercial processor supplied the product for this test, whereas in previous market tests the test product was produced by USDA research laboratories on a pilot plant basis.

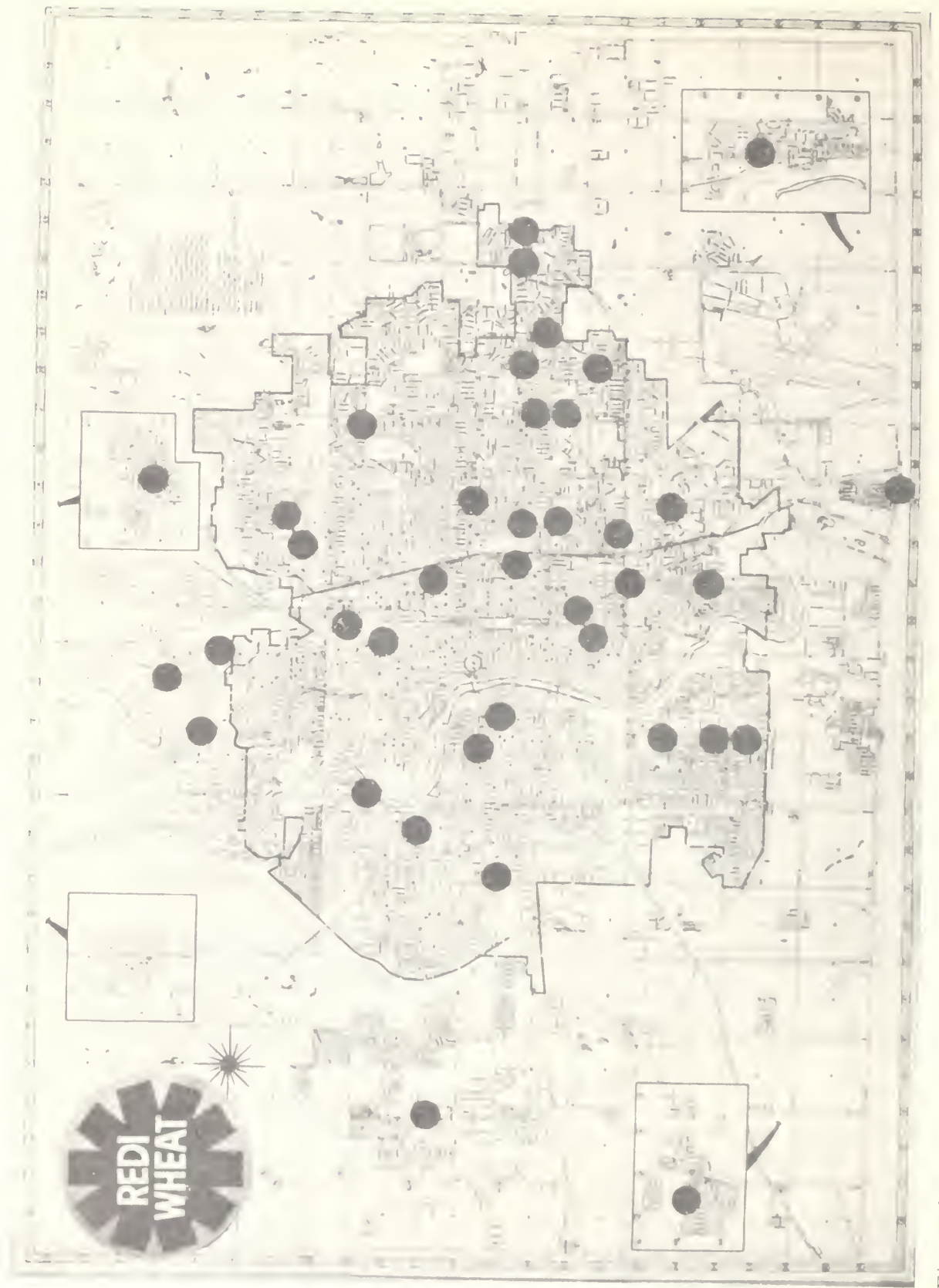


Figure 1.--Geographical dispersion of the sample supermarkets within the Wichita, Kans., metropolitan test area.



Figure 2.--Auditors making an inventory of selected products and of the test product in the storage area of a sample supermarket.

Audits were made on Monday, Tuesday, or Wednesday to coincide with the low-volume shopping days. To the extent possible, the audits were made one day in advance of regular inventory shipments. Each audit store was visited the same day of the week at approximately the same hour (fig. 3).

An audit of the 57 product items was made before the test product was offered for sale in the stores. This was done to provide the researchers with benchmark information on sales of these 57 products before the promotion of the test product in the market.

All supermarket stores (79) as well as all retail food stores in the Wichita area had the opportunity to secure the test product "Redi Wheat" through their regular broker channels during the week preceding the test. March 2, 1961, was the date for displaying the test product to coincide with the beginning of the promotion campaign. The retail price for the 10-week test period was 2 #307 by 306 cans for 37 cents, mix or match, the seasoned or unseasoned test product. Subsequent to the 10-week introduction period, some retail stores priced the unseasoned bulgur at 17 cents a can and the seasoned at 19 cents a can, slightly more than 3 cents a 2-ounce serving for either product (3.09 cents in 17-cent cans and 3.17 cents in



Figure 3.--The auditor visited the sample supermarkets at approximately the same hour and the same day of each week to collect sales data for the test product and the comparable products during the market test.

19-cent cans). Most stores placed the test product in the prepared food section and provided four facings, two for the seasoned and two for the unseasoned Redi Wheat (fig. 4).

#### Household Survey

A household survey was undertaken about 6 weeks after introduction of the test product on the market. The test market area was sampled on a probability basis to allow each household with a telephone in the Wichita urban area an equal chance of being contacted. Households included in the sample were classified on the basis of a screening telephone interview as:

“Nonaware” homemakers -- those who were not aware that Redi Wheat was being sold.

“Aware nonpurchasers” -- those who were aware that Redi Wheat was being sold but who had not purchased.

“Purchasers” -- those who had purchased Redi Wheat.



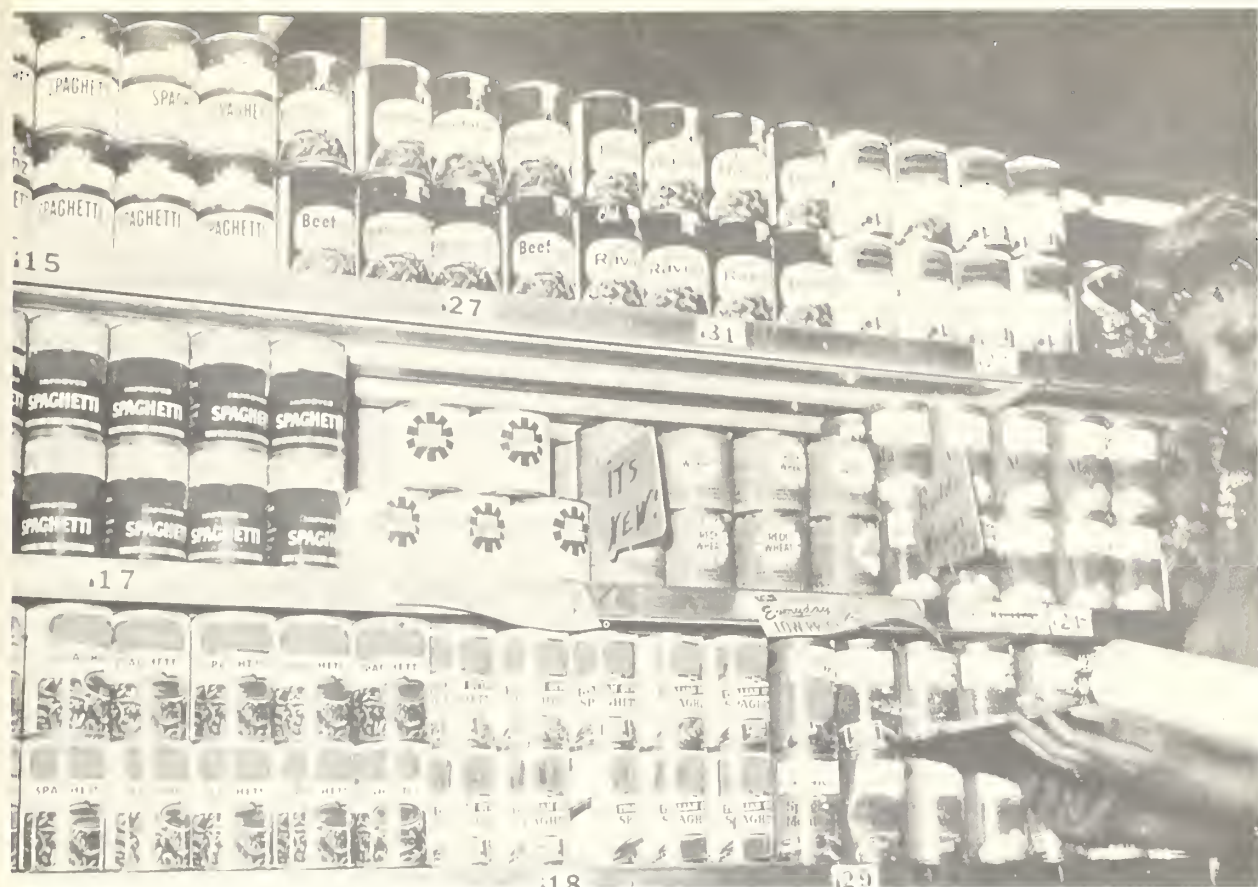


Figure 4.--This supermarket provided four facings for the seasoned Redi Wheat and three facings for the unseasoned Redi Wheat in the prepared foods section of the store.

The incidences of awareness and nonawareness were determined by asking all homemakers contacted several questions. The interview was discontinued for respondents who were not aware of the product. When a family reported that it had purchased Redi Wheat, the telephone interview was terminated and the respondent was visited and interviewed in person. The results shown for the consumer survey are based on contacts with 2,730 homemakers, of whom 441 were unaware of the existence of Redi Wheat, 1,720 were aware of it, but had not purchased it, and 569 had purchased it.

About 2 months after the household survey, a small subsample of the original sample was reinterviewed by telephone to ascertain the purchase situation at a later date. About 9 percent of all homemakers purchased Redi Wheat during the interval between the two surveys. About half of these had purchased prior to the first survey and therefore constituted repeat buyers. About half were new buyers whose first purchase was made after the date of the first survey. The cumulative total of all households purchasing Redi Wheat at least once within 4 months of introduction was 23 percent.

# MARKET TEST RESULTS

## Sales

### First Phase -- A 10-Week Period

Promotion of Redi Wheat began March 2 with all of the supermarkets in Wichita and many of the smaller stores selling the test product. A 4-week promotion campaign was followed by a 6-week period of no promotion. The promotion campaign was limited to 4 weeks to bring the new product to the attention of as many households as possible in as short a time as possible. All kinds of advertising media were used in the promotion; 20 percent of the radio and television stations were used. Success of the promotion campaign is demonstrated by the fact that about 74 percent of the homemakers in the area were aware that Redi Wheat was being sold in the local stores.

Although in-store demonstrations always have been regarded as a desirable method of introducing a new product, they seemed particularly effective for this test product. Figure 5 shows that the demonstration stores accounted for most of the sales of the test product during the promotion period. The 10 stores in which the demonstrations were located each weekend accounted for 66 percent of the sales during the promotion period. Sales in the demonstration stores averaged 12.4 cases per week during the demonstration weeks and 2.3 cases during the nondemonstration weeks sales averaged 1.7 cases per week for those stores not having demonstrations at any time during the promotion period. Some effect of the in-store demonstrations continued, as sales during the 6-week nonpromotion period averaged

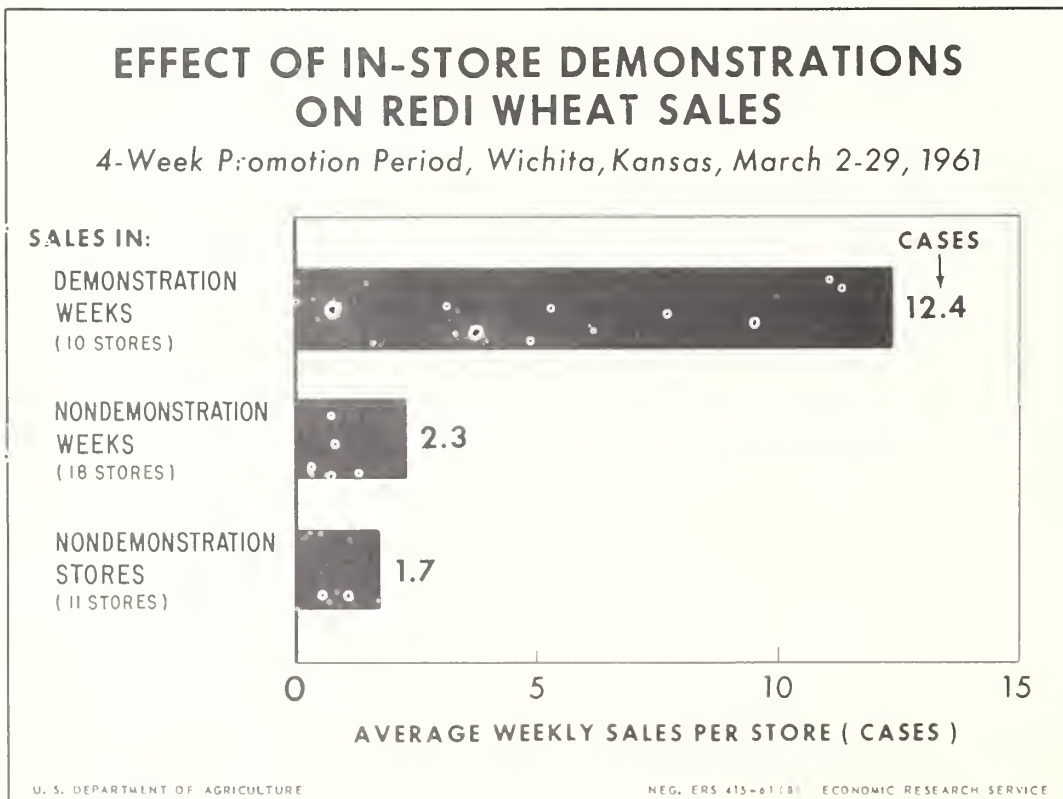


Figure 5

higher for those stores conducting demonstrations during the 4-week promotion period than for those stores having no in-store demonstrations (fig. 6).

During this 4-week promotion period 49,000 Redi Wheat swedish meat balls and Redi Wheat tuna croquettes were served in 28 of the 39 sample stores to demonstrate the versatility of Redi Wheat in 2 of the 19 suggested recipes. Additional information about the in-store demonstrations is given in appendix A, page 32.

During the first 3 weeks of product introduction, sales averaged around 5 cases per store. In the 4th week, the week before Easter, sales averaged about 3 1/2 cases per store (table 2). All Redi Wheat promotion ended with the 4th week and the period of no promotion went into effect.

Sales under conditions of no promotion averaged 1.6 cases per store the 1st week, 1.1 cases per store the 2nd week, and slightly under 3/4 case per store the 3rd week (0.72). The 4-week promotion period apparently had most of its carry-over effect on sales for these first 3 weeks of the 6-week no-promotion period. Sales audited during the 3 following weeks through May 10 under conditions of no promotion averaged 9 cans per store per week or 0.38 case. The sales rate remained fairly steady for the remaining weeks of the market test.

The average rate of sale per week for the 57 other products audited during the pretest week and the 10-week market test period showed that approximately 6 out of 10 products sold less than 1/5 case per store; about 8 out of 10 of the products sold less than 2/5 case per store; and only 2 out of 10 of the products sold 2/5 case or more per store (table 3).

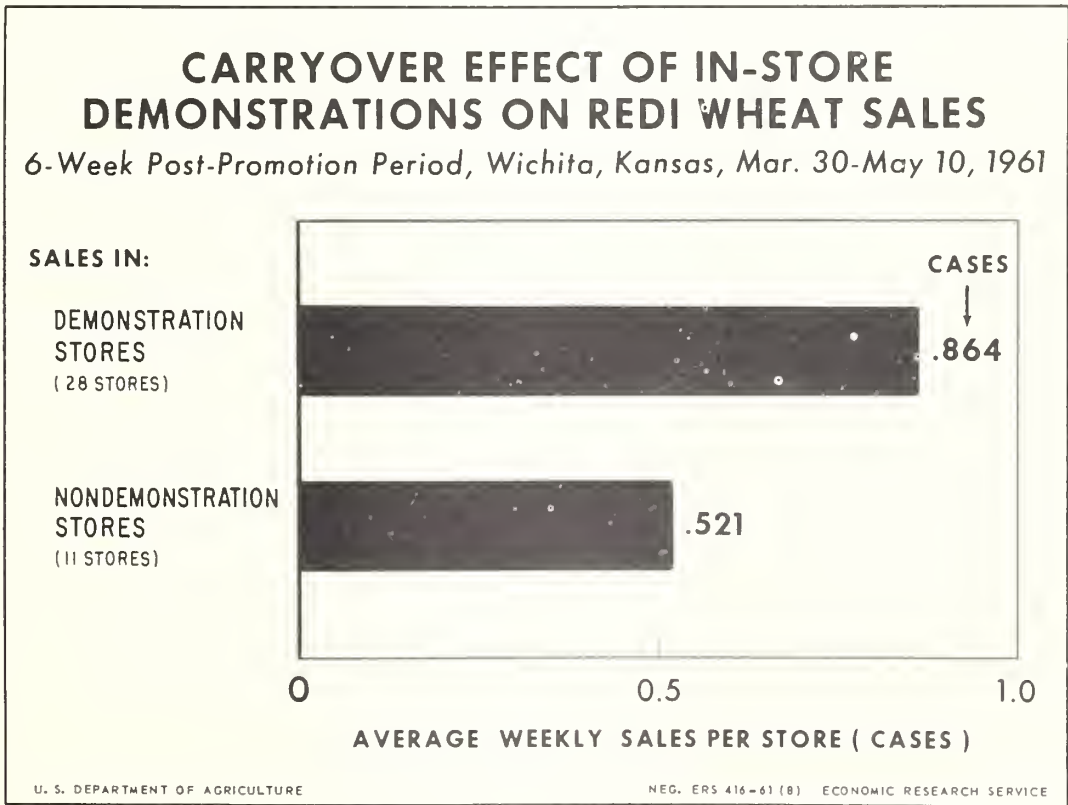


Figure 6

Table 2.--Sales of Redi Wheat in 39 sample supermarkets,  
Wichita, Kans., March 2 - September 27, 1961

Survey phase, and week number	Week begin- ning	Sales per week				Average per store per week	
		Seasoned	Un- seasoned	Total	Cans	Cases	
		<u>Cans</u>	<u>Cans</u>	<u>Cans</u>	<u>Cases</u>	<u>Cans</u>	<u>Cases</u>
First phase:							
1.....	3/2	2,247	2,651	4,898	204.08	125.6	5.23
2.....	3/9	2,323	2,510	4,833	201.37	123.9	5.16
3.....	3/16	2,036	2,616	4,652	193.83	119.3	4.97
4.....	3/23	1,406	1,813	3,219	134.12	82.5	3.44
5.....	3/30	708	820	1,528	63.67	39.2	1.63
6.....	4/6	539	494	1,033	43.04	26.5	1.10
7.....	4/13	320	350	670	27.92	17.2	.72
8.....	4/20	176	203	379	15.79	9.7	.40
9.....	4/27	168	209	377	15.71	9.7	.40
10.....	5/4	144	180	324	13.50	8.3	.35
Average....		1,007	1,185	2,192	91.33	56.2	2.34
Second phase:							
11.....	5/11	160	175	335	13.96	8.6	.36
12.....	5/18	183	231	414	17.25	10.6	.44
13.....	5/25	142	183	325	13.54	8.3	.35
14.....	6/1	154	185	339	14.13	8.7	.36
15.....	6/8	114	124	238	9.92	6.1	.25
16.....	6/15	126	198	324	13.50	8.3	.35
Average....		146	183	329	13.71	8.4	.35
Third phase:							
17.....	6/22	150	140	290	12.08	7.4	.31
18.....	6/29	91	119	210	8.75	5.4	.22
19.....	7/6	120	144	264	11.00	6.8	.28
20.....	7/13	170	119	289	12.00	7.4	.31
21.....	7/20	119	99	218	9.08	5.6	.23
22.....	7/27	102	109	211	8.79	5.4	.23
23.....	8/3	80	84	164	6.83	4.3	.18
24.....	8/10	80	104	184	7.67	4.8	.20
25.....	8/17	100	120	220	9.17	5.0	.24
26.....	8/24	87	120	207	8.62	5.3	.22
27.....	8/31	161	134	295	12.29	7.6	.32
28.....	9/7	126	99	225	9.37	5.8	.24
29.....	9/14	101	157	258	10.75	6.6	.28
30.....	9/21	142	308	450	18.75	11.5	.48
Average....		116	133	249	10.37	6.4	.27

During the 4-week Redi Wheat promotion period, Redi Wheat ranked first in average unit sales per store compared with the 57 audited products, and fourth during the following 6-week period of no promotion for the test product. A dry macaroni and cheese dinner product and two brands of canned spaghetti prepared in tomato sauce with cheese outsold the Redi Wheat during this 6-week period.

Table 3.--Rate of sales per week of the 57 audited items in 39 sample supermarkets, Wichita, Kans., February 20 - May 10 and May 11 - June 21, 1961

Rate of sales per week	February 20 - May 10, 1961 <u>1/</u>		May 11 - June 21, 1961 <u>2/</u>	
	Number of items	Percent of total	Number of items	Percent of total
Less than 1/5th case	34	59.7	5	45.5
1/5th to 2/5th case..	10	17.5	5	45.5
2/5th to 3/5th case..	6	10.5	--	--
3/5th to 4/5th case..	3	5.3	1	9.0
4/5th case and over..	4	7.0	--	--
Total audited.....	57	100.0	11	100.0

1/ Sales of the test product averaged 2.34 cases per store during this introductory period which included the 4-weeks of promotion.

2/ Sales of the test product averaged 0.35 case per store during the 11th through the 16th week of product introduction.

Sales of Redi Wheat during this 6-week period were only one-sixth as large as during the promotion period. Aside from the expected adverse effect on sales when promotion was cut off, several other factors were operating which could account for part of the drop in sales. An important element was the unfamiliarity of the housewife in the use of a completely new food product. Another important factor in the sales drop was seasonality. Since the test product is a food better suited to cool weather, the warm weather beginning in April probably had an adverse effect on sales. This is reasonable since a downturn is normally experienced in demand for well-established food products such as rice, dry macaroni and spaghetti dinners, and canned macaroni and spaghetti products. However, the sales dropoff for Redi Wheat was slightly less than for some other products recently market-tested, where sales after demonstration dropped to one-seventh or one-eighth of the volume in the demonstration period.

Regular promotions which would tend to increase sales were observed for items in the audited product classes during this 6-week period of no promotion for Redi Wheat. The product most frequently promoted during this 6-week period was a canned spaghetti item; it was promoted in 35 of the 39 stores audited.

Sales of the 57 audited items remained fairly constant from the pretest week to the 11th week. The percentage change was less than 1 percent. Purchases of the test product for the most part appear to be in addition to the purchases shoppers made for the audited items (fig. 7).

As noted earlier, 4 facings of the product, 2 seasoned and 2 unseasoned, were provided in the prepared food section of the store. After the 4-week promotion ended one supermarket placed the test product in 4 different locations. As would be expected, the highest percentage of sales was made from the end of the gondola

# DOLLAR SALES OF REDI WHEAT AND 57 ALTERNATE PRODUCTS

Pretest, Promotion, and Post-Promotion Periods, Wichita, Kansas,  
Feb. 20-May 10, 1961

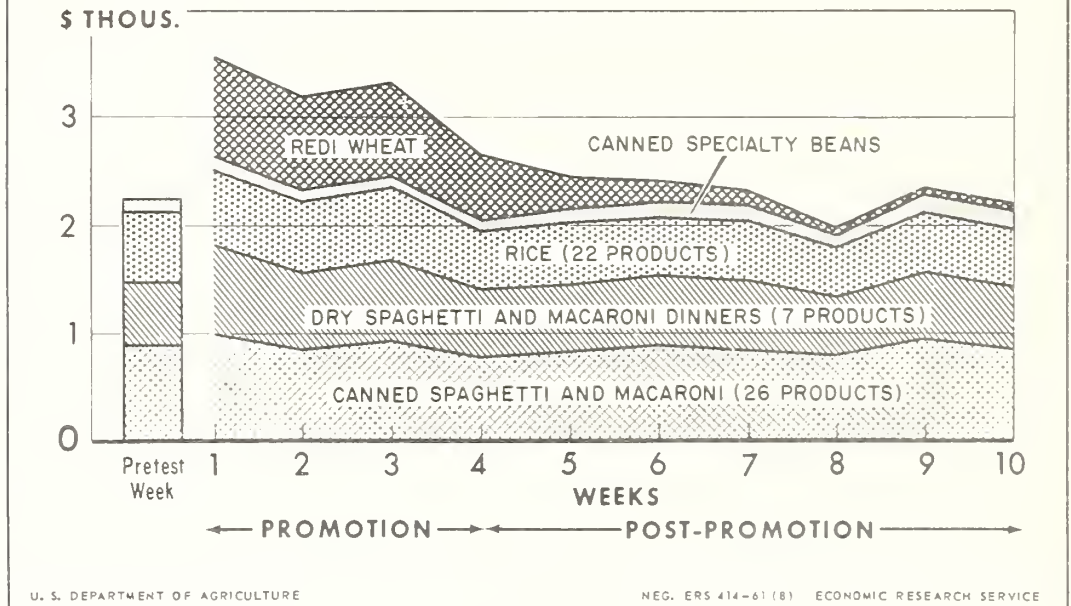


Figure 7

display where 70 to 90 percent of the shopper traffic normally flows.<sup>3/</sup> The other 3 locations were on the sides of gondolas associated with (1) canned spaghetti and macaroni, (2) complete spaghetti dinners, and (3) canned and dry rice products. Sales of the test product were higher when it was displayed along with the more frequently purchased foods.

## Second Phase -- A 6-Week Test Period

Eleven weeks after introduction of the test product, a 3-week followup promotion for Redi Wheat (May 11-31) was begun. This second phase, limited to radio, television, and newspaper advertising, was to assess the sales rate of the new product under conditions of limited promotion. This 3-week promotion excluded the demonstration of the product, relying upon special display and newspaper, radio, and television advertising. Weekly sales of Redi Wheat per store during this period of limited promotion averaged 0.38 case. During the following 3 weeks of no promotion, sales averaged 0.32 case.

During the second phase, dry and prepared spaghetti and macaroni dinners were dropped from the enumeration because users did not consider the test product

<sup>3/</sup> Havas, Nick, and Smith, Hugh M. Customers' Shopping Patterns in Retail Food Stores. U. S. Agr. Mktg. Serv. AMS-400, 14 pp. Aug. 1960, p. 11.

as an alternate for these foods. Eleven products remained for enumeration along with the test product. Of these 11 products, 5 sold less than 1/5 case per store during May 11-June 21, and 10 sold less than 2/5 case per store. The Redi Wheat sold better than 9 of the 11 audited products during this period (table 6, appendix A). The 11 items fall into categories of rice, canned specialty beans, and bulgur.

### Third Phase -- A 14-Week Period

The third phase of the market test began with the 17th week of the study and carried through the 30th week. Weekly sales for the test product only were obtained from all of the original cooperating supermarkets. During this 14-week period, sales of the test product averaged 0.27 case per store per week as compared with 0.35 case during the second phase of limited promotion (table 2). The test product at this level of sales ranks better than 7 out of 10 of the 57 items audited during the first phase (table 6).

### Sales Potential of Redi Wheat

The potential of a new product is ascertained by a study of its sales performance, and by comparing its performance with that of similar but commercially established food products.

### Comparisons With Other Sales Studies

In a 1960 study, the fourth major study made by the Progressive Grocer of supermarket sales, five Dillon supermarkets in Wichita and other cities in Kansas were researched for 16 weeks to unfold the modern grocery story of many items selling few cases. This study showed that of the 5,227 items carried by the Dillon test stores, 4,195 were nonperishable grocery items and the remaining 1,032 were perishables. In the grocery section the average sales were 12 units or one-half case per item per week. Nine out of 10 grocery items sell less than a 24-unit case a week. Less than 6 percent of the items sell 1 or 2 cases a week. Sales velocity in relation to similar items rather than sheer velocity of sales must determine whether a new item is to be kept on the shelves. 4/

An earlier study conducted by Progressive Grocer in six Super Valu stores in Minnesota in 1957 showed that for all of the 4,203 grocery items carried, excluding the perishables, the average sales were only slightly more than 8 units, or one-third case per item per week for each \$20,000 of weekly sales volume. 5/ Many grocery items, of course, sold much less than 1/3 case per store per week.

By comparison, the Redi Wheat test product averaged weekly sales of almost one case per store during the 30 weeks that sales data were collected. Excluding the 4-week promotion period, the test product averaged weekly sales of about 10 cans, or 2/5 case, per store during the 26 weeks. (See table 2 for weekly sales.)

4/ Progressive Grocer. The Dillon Study. May 1960, p. D18.

5/ Progressive Grocer. Super Valu Study. 1957, pp. 17-32.

## Potential Indicated by Sales Audit

What is the future for a new food product that has been demonstrated to sell better than 7 out of 10 comparable products carried by supermarkets? This record was made by Redi Wheat in the face of some handicaps, such as: (1) an unattractive label, which was later redesigned and is now being used on the product commercially available in the Kansas-Missouri-Colorado area; (2) recipes which were not completely suitable for the product used in the test; and (3) the test being made in warm weather when the product is more suited to cool weather dishes.

Will the test product keep its place on the supermarket shelves? Managers of the 39 audit stores indicated that they would continue to carry the test product as long as the sales velocity continued high in relation to comparable food items.

The product used for market testing is only one of a wide variety of convenience foods which can be made from wheat bulgur. A cracked product may be offered as a convenient ingredient. Such a product would have been more compatible with some of the recipes used in the market test. Barbecue style bulgur may be offered as a heat-and-serve specialty item. A canned pudding offers possibility as a dessert item. These are just a few of the possibilities open to food processors for a new line of wheat food products.

## Potential Indicated by the Consumer Survey

Compared with previously tested Potato Flakes and Insta Rice, Redi Wheat appears to warrant a favorable position in the market. The analyses of reports by users of Redi Wheat suggest that, mainly, they were pleased with the product and the great majority expressed an intention to continue using it fairly frequently.

On the other hand the fact that there were comparatively fewer repeat purchases of Redi Wheat than of either of the other two products suggests some caution. Only 9 percent of the Wichita homemakers in the survey purchased during the 2 months following the initial consumer survey, whereas 18 percent purchased during the first period. About half of the purchasers in the second period were repeat purchasers. Within 4 months of its introduction, 23 percent of the homemakers had bought the test product at least once.

## RESULTS OF THE HOUSEHOLD SURVEY

### Effectiveness of the Promotion Campaign

About three-fourths of the homemakers in the Wichita area were aware that Redi Wheat was being sold in the local food stores and slightly less than one-fifth bought it at least once.



These results compare quite favorably with the results of past market tests which introduced two other new food forms, Insta Rice and Potato Flakes: 6/

	<u>Insta Rice</u> (after 10 weeks)	<u>Potato Flakes</u> (after 6 weeks)	<u>Redi Wheat</u> (after 6 weeks)
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Aware of availability . .	27	51	74
Purchased . . . . .	9	14	18

Relatively speaking, these results suggest there was effective promotion of Redi Wheat. It should be noted, however, that the length of time between the introduction of the product into the food stores and the beginning of the household survey is comparable only for Redi Wheat and Potato Flakes (6 weeks). In the market test of Insta Rice, 10 weeks elapsed between the date of introducing the product and the start of the household survey. No analysis or comparison is made here of the amount or type of promotion for the three products.

Homemakers' replies to questions in the survey are given in detail in tables 12-46, appendix B. Tables 47-52 give information about the sample households.

When asked how they found out about Redi Wheat, the homemakers referred to several media in their replies. About one-half of the homemakers who were aware of the product stated that they had learned of it through the newspaper, radio, or television. The remaining replies tended to indicate a variety of sources, for example, "saw it in the store" or "heard about it from a friend" (table 12).

After the initial response, homemakers who were aware of the product were asked if they had also seen or heard of Redi Wheat from sources they had not mentioned spontaneously (table 13). Their initial replies combined with their replies to the probing second question reveal some shift in emphasis to recall of in-store display and demonstration including the recipe booklet (table 14). The emphasis is most marked among those homemakers who had purchased Redi Wheat and may reflect a selective perception for those grocery items which appeal to the individual homemaker.

Insofar as the effectiveness of the media used in the promotion campaign is concerned, the results of the Redi Wheat market test compare favorably with the results obtained in the market tests of Potato Flakes and Insta Rice (table 15).

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6/ The figures in this section on Insta Rice and Potato Flakes are from the following reports:

Enochian, Robert V., Hunter, J. Scott, and Harris, Roland G. Canned Cooked Rice -- The Market Potential for a New Food Product. U. S. Dept. Agr. Mktg. Res. Rpt. 249. 49 pp., illus. 1958.

Dwoskin, Philip B., and Jacobs, Milton. Potato Flakes -- A New Form of Dehydrated Mashed Potatoes: Market Position and Consumer Acceptance in Binghamton, Endicott, and Johnson City, New York. U. S. Dept. Agr. Mktg. Res. Rpt. 186. 54 pp., illus. 1957.

Percentages of users who became aware of the products through various sources are listed below:

<u>Sources of homemaker's awareness</u>	<u>Potato Flakes</u>	<u>Insta Rice</u>	<u>Redi Wheat</u>
	(after 6 weeks)	(after 10 weeks)	(after 6 weeks)
	<u>Percent 1/</u>	<u>Percent 1/</u>	<u>Percent 1/</u>
From newspaper, radio or TV . . . . .	83	35	90
Store demonstration . . }	2/ 82	{ 36	45
Store shelf or display . }		{ 33	71
Recipe booklet . . . . .	--	--	55

1/ Percentages add to more than 100 because some homemakers gave more than one reply.

2/ "Saw product in stores."

Reasons for Purchasing the First Time

Curiosity about something new seemed to be the most frequent reason for purchasing the first time. Over half of the purchasers gave as a reason for their first purchase that they simply "Wanted to try it." The remaining replies tended to be scattered among a number of reasons such as "Liked the taste of a sample that I received," "It was recommended," or "We like wheat," (table 16).

Reasons for Purchasing Again or Not Purchasing Again

Only about one-fifth of those who had purchased Redi Wheat had done so more than once. The major reasons given for this repeat were that the purchaser had liked the flavor, its nutritive value, or its ease of preparation (table 17).

The percentage of homemakers who had purchased the test product only once was larger for Redi Wheat than for Potato Flakes and Insta Rice. There was more repeat purchasing of the latter two items. It should be remembered, however, that the interval between the introduction of the product and the start of the household survey is comparable only for Redi Wheat and Potato Flakes (6 weeks). For Insta Rice the interval was 10 weeks. The longer interval might be expected to result in a greater number of repeat purchases. The purchase patterns of the three products are as follows:

<u>Number of times homemaker had purchased</u>	<u>Potato Flakes</u>	<u>Insta Rice</u>	<u>Redi Wheat 1/</u>
	(after 6 weeks)	(after 10 weeks)	(after 6 weeks)
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Once only . . . . .	38	60	74
Twice . . . . .	24	17	10
Three . . . . .	13	2/ 22	5
Four or more . . . . .	23	--	7
Not ascertained . . . . .	2	2	4
Total . . . . .	100	100	100
Number of cases	294	126	314

1/ The 314 purchasers represents a subsample for purposes of interviewing, of the original 569 purchases.

2/ 3 or more times.

Of those homemakers who had not purchased Redi Wheat more than one time, about two-fifths indicated that they had not used the product yet or that they still had some on hand. The replies of these homemakers to the question, "What were the reasons that you did not purchase it again?" are as follows:

<u>Replies</u>	<u>Percent</u> <sup>1/</sup>
Homemakers giving reasons indicating possible future purchase	51
Had not yet used it <sup>2/</sup> . . . . .	20
Still had some on hand . . . . .	22
Use it in certain dishes only or at certain intervals only . . .	13
Homemakers giving reasons indicating unlikely future purchase	28
Respondent or family did not like it . . . . .	18
Did not like the taste . . . . .	5
Did not like the texture . . . . .	5
Miscellaneous . . . . .	9
Not ascertained . . . . .	<u>12</u>
Total . . . . .	100
Number of cases	257

<sup>1/</sup> Percentages add to more than subtotals because some homemakers gave more than 1 reply.

<sup>2/</sup> Those who had not yet used the Redi Wheat that they had purchased are included here even though they were not asked this question, nor were they asked any of the questions 7 through 24 of the questionnaire (appendix B). Their inclusion here is an assumption that they had not repurchased because they had not yet used what they had.

For about half of the homemakers who had purchased Redi Wheat only once, there was not a strong negative feeling and they might possibly be considered future purchasers. In reply to the question asked of users later in the interview, "Do you think that you will continue serving Redi Wheat or not?", about two-thirds said that they planned to continue serving it (table 39). These findings were later tempered by the results of the telephone followup which indicated that only 1 out of 20 purchasers had bought again during the 2 months which followed the survey.

Possibility of Future Purchases by Aware Nonpurchasers

Among the aware nonpurchasers, 46 percent said they planned to purchase Redi Wheat. Another 33 percent thought that they might purchase but were indefinite or not sure that they would. Only 18 percent of them indicated categorically that they did not intend to purchase any Redi Wheat (table 19).

The 51 percent who had answered "no," "perhaps," "not sure," etc., when asked if they planned to buy, were also asked why it was that they expressed a doubtful or negative view (table 20). Less than half of this group gave reasons such as "Do not like it," "Do not cook much at home," or "On a diet," which seemed to eliminate them as possible purchasers. Another group of about the same size gave no reason for their views and represent an unknown as far as possible future purchases are concerned.

It is important to note (table 21) that one-fourth of the aware nonpurchasers did not know what kind of food Redi Wheat actually was, and another one-fourth thought it was a breakfast cereal. Thus, despite a promotion campaign there remained a somewhat confused product image among half of this group who had heard of Redi Wheat.

In the market tests of Potato Flakes and Insta Rice, a sizable majority of the aware nonpurchasers, when asked directly if they might purchase the test product, indicated that they would or "might" purchase the products. However, in these two studies, a question was asked also, "How is it that you did not buy?" The replies to this latter question, as shown below, present Redi Wheat in a more favorable position:

<u>Aware nonpurchasers'</u> <u>future intentions</u> <u>to purchase</u>	<u>Aware nonpurchasers</u>		
	<u>Potato Flakes</u>	<u>Insta Rice</u>	<u>Redi Wheat</u>
	(after 6 weeks) <u>Percent</u>	(after 10 weeks) <u>Percent</u>	(after 6 weeks) <u>Percent</u>
Homemakers indicating possible future purchase . .	32	17	56
Homemakers indicating unlikely future purchase . . .	48	44	21
Homemakers uncertain or ambiguous . . . . .	<u>20</u>	<u>39</u>	<u>22</u>
Total . . . . .	100	100	100
Number of respondents	278	151	417

Again, however, it should be noted that the telephone followup, 2 months after the original survey, revealed that only 9 percent of all the homemakers had purchased during the 2-month interval that followed the first survey, and only about 5 percent were new buyers coming from the original group of nonpurchasers. It would seem that the aware nonpurchasers overestimated their future buying level.

Homemakers' Opinions of Redi Wheat

The response of purchasers to the two kinds of Redi Wheat offered for sale in the Wichita market test tended to divide fairly evenly; about a third purchased the seasoned kind only, about a third purchased the unseasoned kind, and about a third purchased both kinds. This was not simply a question of "chance" because three-fourths of the purchasers said that they noticed, before purchasing, that there were two kinds and presumably made their choice on the basis of this knowledge (table 23).

Not all of those who had purchased Redi Wheat had used it by the time they were interviewed. <sup>7/</sup> The extent to which purchasers had used the Redi Wheat that they had purchased, is shown on the following page.

<sup>7/</sup> Questions 7-24 and 26 on use of and opinions about Redi Wheat were asked only of users. Users total 262. If a homemaker had used both kinds however, questions 15-22 and 24-26 were asked separately for each kind used. For these questions then, the total number of interviews equals 301 since each user of both kinds had in effect two interviews, one for each kind used. The number using each kind is as follows: Seasoned, 143; unseasoned, 158; total, 301.

Homemakers who had purchased

	Seasoned only	Unseasoned only	Both	Total	
	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Percent</u>
Homemaker had used:					
Seasoned only	75	--	29	104	33
Unseasoned only	--	99	20	119	38
Both	--	--	39	39	12
Neither	12	14	24	52	16
Number of respondents	87	113	112	314	100

General Satisfaction with Redi Wheat

Those who had used Redi Wheat were favorably impressed with it and had a fairly strong interest in future purchases. About 4 in 10 homemakers reported nothing disliked about the product. An equal proportion reported both likes and dislikes. Less than 2 in 10 reported "nothing liked" about the product (table 24).

Since the success of a new product may depend as much on the family's reaction as that of the homemaker, respondents were also asked, "What did the rest of the family think of Redi Wheat?"

The homemakers reported that adult members of the family liked Redi Wheat better than the children did. Adults like the seasoned and unseasoned equally well, while there appeared to be some tendency for children to prefer the seasoned over the unseasoned kind.

Nature of the Homemakers' Likes and Dislikes

Its supposed beneficial effect on health was the characteristic homemakers most often cited as being what they liked about Redi Wheat. About 4 in 10 of the homemakers favorably impressed by Redi Wheat gave health reasons for liking it, that it is "good for you," "nutritious," "has vitamins," etc. Almost as many indicated that they liked the taste, and over 3 in 10 reported that they liked the variety of recipes in which Redi Wheat could be used. "Convenience" dropped to 2 in 10, as did "economy" (table 25).

Those homemakers who expressed dislikes about Redi Wheat tended to feel that it needed longer cooking, more water, or more preparation than the recipe called for. Of almost equal importance among the things disliked were the related characteristics of taste and texture. A substantially greater proportion of users of the unseasoned form objected to the texture ("kernels too big," "too chewey," "rubbery") than users of the seasoned Redi Wheat (table 26).

Consumers' Satisfaction with Cost and Size of Can

A large majority felt that the size of the present can was right for their needs. Those who suggested a change in the size of the can tended to want a smaller can (table 31).

When asked what Redi Wheat cost per can, 73 percent of the users gave the correct price. Less than 10 percent of the users gave a price which was higher or lower than the actual price (table 32). When asked whether or not this price was in line "considering the cost of foods nowadays," most of the users felt that the price was right (table 33).

Aware nonpurchasers, of course, were less likely to remember the price, and declined to guess or judge its reasonableness (tables 32 and 33).

### Ways in Which Redi Wheat Had Been Used

Another evaluation of Redi Wheat was in terms of the reaction to specific suggested recipes. The majority had limited their experimentation to one dish only, as a meat extender (in meat loaf, meatballs, etc.). About one-third had used it in two or more ways (table 35).

There were very few differences in the specific recipes tried by users of the two kinds of Redi Wheat except that a substantial proportion of users of the unseasoned kind had tried it as a breakfast food. Obviously, this use was not as appropriate for the seasoned kind (table 36).

Users were asked also what they thought of Redi Wheat in each of the dishes in which they had used it. The responses regarding most recipes are too few to be statistically reliable except "as a meat extender" and "as a breakfast food." Overall, the majority of users were satisfied with Redi Wheat in those dishes in which they had tried it, as shown in the following tabulation:

<u>Homemakers's reply was:</u>			
	Favorable	: Unfavorable	: Do not know or no answer
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
<u>Had used Redi Wheat:</u>			
<u>As a meat extender</u>			
Had used seasoned	63	33	4
Had used unseasoned	65	30	5
Both combined	63	32	5
 <u>As a breakfast food</u>			
Had used unseasoned	61	32	7
 <u>As a separate side dish or vegetable</u>			
	58	40	2
 <u>In a casserole</u>			
	64	10	26
 <u>In other dishes</u>			
Had used seasoned	72	20	8
Had used unseasoned	58	18	24
Both combined	66	19	15

Users were asked to rate Redi Wheat in terms of cost per serving, variety of uses, ease of preparation, and family preferences in comparison with white potatoes, rice, macaroni, and baked beans. The ratings consisted of "better than," "about the same," "not as good as," and "never use or not applicable."

On an average, about 40 percent rated Redi Wheat as better than or about the same as the competing foods on a cost-per-serving comparison. They gave it a higher score on its "variety of uses." Those favoring Redi Wheat on this attribute rose to almost 60 percent.

Regarding ease of preparation, Redi Wheat seemed to have a comfortable edge over white potatoes, rice, macaroni, and baked beans at 65 percent, but when it came to general family preference it lost its leadership to the other products (table 37).

### Homemakers' Expectations for the Future Use of Redi Wheat

About 70 percent of the users indicated that they expected to continue serving Redi Wheat in their homes. Fifteen percent said that they would not serve Redi Wheat again, and about 10 percent were undecided as to future use (table 39).

Over half of those who planned to continue using Redi Wheat thought that they might use it once a week or more (table 41). About one-fourth said that they thought they would use it less frequently, only once or twice a month.

A comparison of the expected frequency of serving Redi Wheat and the competing products reveals that the experimental wheat is in only a slightly less favorable position than white potatoes (table 42). Some caution should be used in interpreting these optimistic findings because of the lower ratings on critical attributes such as cost per serving and family preference.

It is also important to remember that the telephone followup 2 months after the first survey revealed that only 9 percent of all homemakers had purchased Redi Wheat during this period; and of these only 4.5 to 5 percent had been purchasers at the time of the survey. One might have expected 10 to 12 percent of the previous users to repurchase if all had carried out their expressed intention.

In the two market tests of Potato Flakes and Insta Rice, a much higher percent of users expressed an intention to continue using the respective products. In the case of Potato Flakes, 89 percent of the users expressed an intention to continue using them, while 83 percent of the Insta Rice users said that they would continue serving that product. Data are not available regarding the number of these homemakers who carried out their expressed intentions.

The majority of those homemakers who planned to continue using Redi Wheat were pleased with the recipes they had tried and said there were no ways in which they would not use it again (table 44).

A sizable proportion said that their future purchases of Redi Wheat would be increased if it cost less per can, but a group of equal size said they would not buy more if it were cheaper (table 45).

### Preference for Seasoned or Unseasoned Redi Wheat

When asked which kind they would prefer, if only one kind were to be available, there was a tendency to prefer the unseasoned over the seasoned Redi Wheat. This was reconfirmed by two additional points: (1) Many users of seasoned said they would switch to unseasoned and (2) the very strong preference for unseasoned by

those who had used either the seasoned alone or both kinds. The number of "both" users is too small to permit additional analysis (table 46).

## RESULTS OF THE RESTAURANT SURVEY

As part of the Redi Wheat market test, owners or managers of 97 restaurants in the Wichita urbanized area were interviewed to determine the acceptance of Redi Wheat as a restaurant food. This group was composed of 45 restaurateurs who were members of the Kansas Restaurant Association and had purchased or received a sample of Redi Wheat, and of 52 restaurateurs selected at random from a list of members for whom there was no record of purchase or receipt of the product. Information about restaurants in the sample is given in tables 53-59.

Those who had purchased and used Redi Wheat were interviewed about how they had used it, how they had liked it, and whether or not they planned to continue using it. Those who had not purchased or used Redi Wheat were asked why they were not interested in it and whether or not they might be potential purchasers.

### Awareness and Purchase

About one-third of the restaurateurs in the Wichita area had purchased Redi Wheat or received a free sample. Most of the remaining two-thirds had been contacted by their wholesaler and asked to buy or had been told of Redi Wheat by the Kansas Restaurant Association. Almost all of the restaurateurs were aware that the product was for sale in the Wichita area.

A majority of those who were aware but had not purchased did not give a reason for nonuse. Those who replied tended to give general and vague reasons, suggesting that they had not been effectively exposed to promotion.

The restaurants that bought or used Redi Wheat tended to be the larger restaurants doing a greater volume of business and serving complete meals or platters. The aware nonpurchasers were the smaller counter-type places which served less expensive and primarily a la carte items.

### Restaurant Use of Redi Wheat

Unfortunately, at the time of the interview Redi Wheat had been used in only 26 of the 45 restaurants where it had been purchased or received. This number of users was too small to permit any statistically meaningful analysis of the replies to the questions on use of and satisfaction with Redi Wheat. However, it may be of interest to point out some of the highlights, even though it should be understood that these statements are based on a very limited number of replies.

Of those who had purchased but had not yet used Redi Wheat, about half gave no reason for not having used it. The remainder indicated that they had not had time, did not know how to use it, or did not make dishes that called for it.

About half of the users had purchased Redi Wheat more than once. The principal reasons given for purchasing it again were simply that the restaurant operator liked it or that his customers liked it. About half of those who did not purchase more than once explained that they still had some on hand or had not yet made those dishes again in which they used it.



The most frequent use of Redi Wheat, as in the household study, was as a meat extender (in meatballs or meat loaf). Reported customer reaction to this use was divided between a favorable and an indifferent or poor reaction. The restaurant operators were generally favorable toward Redi Wheat as a meat extender, although perhaps the most frequent criticism of it was that it needed longer cooking to make it softer, less dry, and less chewy.

Besides being used as a meat extender, Redi Wheat was used in perhaps a dozen other dishes by the restaurants. These uses ranged from desserts and salads to soups. Although the number of restaurants using it in any one of these other dishes is quite small, operators seemed satisfied with the product and felt that their customers were also pleased. The 26 restaurants who had used Redi Wheat had served it a total of 134 days at the time of the interview.

Over half of the users felt that the present size of the can was about right. <sup>8/</sup> A few would have preferred a larger can and a few had no opinion about the size of the can.

In two out of three uses, Redi Wheat displaced some other product. The products reported as most frequently displaced were rice, meat, and bread or cracker crumbs.

Asked to give a general or overall evaluation of Redi Wheat, most of the restaurant operators who had used the product seemed well satisfied with it. About half reported that there was nothing that they disliked about the product. Only two restaurant operators reported that there was nothing that they liked about the product. The remainder expressed a combination of likes and dislikes.

Favorable comments by the restaurant operators tended to emphasize that Redi Wheat was a good filler or additive, that it was healthful, easy to prepare, and had a good taste. Negative comments tended to emphasize that it was too hard or chewy as it came from the can and that it required additional cooking to soften it before it could be used.

Over half of the users expressed an intention to continue using Redi Wheat. The remainder split evenly between "not continue" and "undecided." Those who were undecided or definitely not planning to use it again gave as reasons for their view that they did not make enough things that called for it or that it was too expensive.

Of those who planned to continue using Redi Wheat almost all indicated that they would use it once a week or more. About half of those who planned to continue using the product replied that it could be improved by making it more moist, softer, and less chewy. The remaining half were satisfied with it as it was.

## APPENDIX A -- MARKET TEST

### Processing Methods and Costs

The test product was processed from hard red winter wheat. The initial processing step is to clean the grain and remove the outer bran coats. This partial debranning is accomplished by passing slightly moistened wheat through a series of

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<sup>8/</sup> The 401 x 411 size round sanitary can was used for the institutional pack and filled with 23 ounces of the unseasoned and 24 ounces of the seasoned Redi Wheat.

debranning machines of a type customarily used for removing bran from rice (fig. 8). The debranned wheat is then processed through a disc cleaning machine to remove cracked, broken, or shriveled grains and foreign materials. The cleaned debranned wheat is then ready for cooking and canning.

The capacity of the equipment used in cooking the test product permitted batch processing of 600 pounds of wheat at a time. A 600-pound batch of wheat was cooked in 1,600 pounds of water for 40 to 45 minutes at 190° F. in a steam-jacketed kettle with continuous stirring (fig. 9).

The cooked wheat in water was pumped to draining screens. Cold water was added to the cooking kettles as soon as the pumping began in order to cool the wheat and to aid in pumping. After the wheat was drained, it was rinsed with cold water until its temperature was about 75° F. The resultant moisture content of the kernels was 55 to 57 percent, which is sufficient moisture to permit complete gelatinization of the starch during subsequent reheating of the filled cans.



Figure 8.--Debranning wheat for the market test product by using debranning machines connected in series.



Figure 9.--A 600-pound batch of Redi Wheat is cooked in a steam-jacketed kettle with continuous stirring.

The cooled wheat was thoroughly drained and then placed in a ribbon-type mixer. For the unseasoned bulgur test product, 9 pounds of salt were added and thoroughly blended in. The salt content as canned is 0.015 percent by weight. For the seasoned bulgur test product the following seasonings were added to a 600-pound batch of wheat: Chicken fat, 15 pounds; chicken stock base, 14 pounds and 1 ounce; toasted dehydrated onion flakes, 8 pounds and 4 ounces; salt, 2 pounds; herbs mixture, 2.5 ounces; and monosodium glutamate, 10.5 ounces. Vacuum cans, size 307 x 306 were used for the test product. The cans were filled to 11 ounces for the unseasoned bulgur and to 12 ounces for the seasoned bulgur. A large size can was also packed for use by restaurants, in school lunch programs, and by other institutional users. The 401 x 411 size round sanitary can was used for this purpose and filled with 23 ounces of the unseasoned and 24 ounces of the seasoned bulgur. Only the 307 x 306 size can was made available to retail food stores.

The cans were sealed under as high a vacuum as possible. A 26-inch vacuum was preferred. Actual sealing vacuum was 22 inches for the 307 x 306 size can and 19 to 20 inches for the 401 x 411 size can.

All cans were retorted (reheated) at 240° F. using a slow come-up time, a minimum of 10 minutes, and a slow pressure release. The process time at 240° F. for the 307 x 306 size can was 90 minutes for both the seasoned and unseasoned product; for the 401 x 411 size can the process time was 135 minutes for the seasoned and 115 minutes for the unseasoned product (fig. 10).

Cost data obtained from processing of the market test products indicate that unseasoned bulgur was made and packaged for retail distribution f.o.b. plant for about 9 cents (8.83) for a 307 x 306 size can containing 11 ounces, or five and one-half 2-ounce servings. The seasoned bulgur packaged for retail distribution f.o.b. plant was made for 12.75 cents a 307 x 306 size can containing 12 ounces, or six

Food Value

Tables 4 and 5 give information on food values of wheat, dry bulgurs, and Redi Wheat.

Table 4.--Nutrient content of partially debranned raw wheat and of canned partially debranned wheat (per 100 grams)

Ingredient	Partially debranned hard red winter wheat		Canned product unseasoned <u>l</u> /		Canned product seasoned <u>l</u> /	
	(as is)	(dry basis)	(as is)	(dry basis)	(as is)	(dry basis)
Moisture (gm.)	8.9	--	56.4	--	54.6	--
Food energy (cal.)	349	383	170	390	180	397
Cr. protein (gm.)	12.6	13.8	6.2	14.2	6.2	13.7
Cr. fat (gm.)	1.4	1.5	0.7	1.6	3.3	7.3
Carbohydrate:						
Total (gm.)	71.2	78.2	34.3	78.7	31.4	69.2
Cr. fiber (gm.)	1.4	1.5	0.8	1.8	0.8	1.8
Ash (gm.)	1.6	1.8	2.1	4.8	1.7	3.7
Calcium (mg.)	27.0	29.6	20.2	46	20.0	44
Phosphorus (mg.)	470	516	200	458	195	430
Iron (mg.)	5.4	5.9	1.28	2.9	1.38	3.0
Thiamine (mg.)	0.39	.43	0.05	0.12	0.06	0.13
Riboflavin (mg.)	0.09	.10	0.03	0.07	0.04	.09
Niacin (mg.)	6.08	6.7	2.42	5.6	3.01	6.6
Sodium (mg.)	--	--	599	1,370	460	1,010
Potassium (mg.)	222	244	87	200	112	247

l/ Redi Wheat -- canned cooked partially debranned, prepared by W.R.R.L. process and marketed by the Kansas Wheat Commission. When prepared for eating, moisture content increases to about 68 percent.

Source: Field Crops Laboratory, Western Utilization Research and Development Division, Agricultural Research Service, U. S. Department of Agriculture. December 26, 1961.

Table 5.--Nutrient content of some commercial dry bulgurs (per 100 grams)

Ingredient	Sample no. 1	Sample no. 2	Sample no. 3
	(Club wheat)	(Common white)	(Hard red winter)
	(as is)	(as is)	(as is)
	(dry basis)	(dry basis)	(dry basis)
Moisture (gm.)	8.9	9.2	9.7
Food energy (cal.)	358	365	355
Cr. protein (gm.)	7.7	10.3	10.7
Cr. fat (gm.)	0.8	1.2	1.2
		1.3	1.3
Carbohydrate:			
Total (gm.)	79.7	76.7	75.4
Cr. fiber (gm.)	1.5	1.3	1.6
Ash (gm.)	1.4	1.4	1.4
		1.5	1.5
Calcium (mg.)	25	36.0	32.2
Phosphorus (mg.)	300	300	380
Iron (mg.)	1.2	2.0	2.1
Thiamine (mg.)	--	--	--
Riboflavin (mg.)	--	--	--
Niacin (mg.)	--	--	--
Sodium	--	--	--
Potassium (mg.)	262	310	229
		341	254

Source: Field Crops Laboratory, Western Utilization Research and Development Division, Agricultural Research Service, U. S. Department of Agriculture. December 26, 1961.

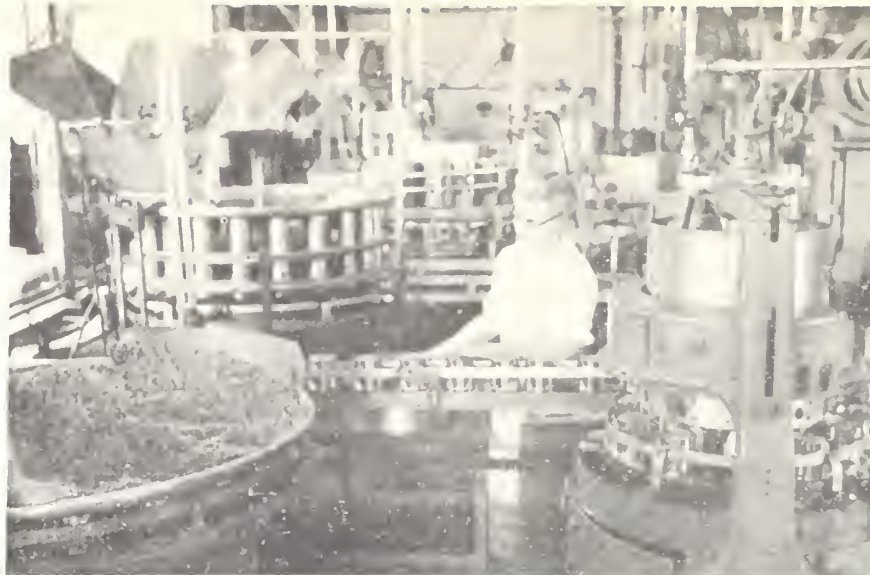


Figure 10.--Sealing the test product.

2-ounce servings. It is anticipated that some economies could be introduced on production of a commercial volume of the canned bulgur for national distribution. <sup>9/</sup>

### Organization and Cost of Promotion Campaign

#### First Phase Promotion

During the first week of the bulgur (Redi Wheat) market test, a 4-week advertising and promotion campaign was launched by the Kansas Wheat Commission through its advertising agency, The High Plains Advertising Agency. The campaign used all media; about 20 percent of the available radio and television media were used. Promotion expenditures were: (1) \$894 on radio using a combination of spots, live broadcasts, and a contest for the best and the most Redi Wheat recipes; (2) \$1,900 on television advertising using a total of 60 spots, both 1-minute and identification spots; (3) \$1,749 expenditure on newspaper -- six 2-color advertisements of 600 lines each were placed in the only daily newspaper published in Wichita (fig. 11); (4) \$80 expenditure on one 2-column by 4-inch advertisement placed in the Wichita This Week magazine; and (5) \$717 was spent on developmental work slides, artwork, mats, 2-color plates, and veloxes. These expenditures add to a total of \$5,340 spent for direct advertising.

In-store demonstrations were used for 4 consecutive weekends in 10 stores each week. The total cost amounted to \$5,776. This includes \$1,293 spent for materials to make 80,000 Redi Wheat swedish meat balls and Redi Wheat tuna croquettes of which 50,000 were served in the sample stores (fig. 12). In-store demonstrators and the home economists and cooks who prepared the 80,000 meat balls and croquettes were paid \$4,127 (fig. 13). Additional materials to meet the high health

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<sup>9/</sup> Cost data were furnished by Trenton Foods, Inc., the processor who cooperated in the market test.

Now Available! at All Our Stores



**THE NEW  
VERSATILE  
WHEAT PRODUCT**

REDI-WHEAT is a newly developed food product. Fast, easy, healthful meals in a wide variety of dishes from soup to dessert are easily prepared with REDI-WHEAT.

10-oz.  
can.....

20-oz.  
can.....

C  
C



**FREE Recipe Booklet**

Pick up your FREE copy at our stores today!



**The New  
Versatile Wheat  
Food Product**

REDI-WHEAT is a newly developed, nutritious, and tasteful food made from processed whole kernels of wheat. There is a wide variety of dishes from soup to desserts which can be made from REDI-WHEAT. Fast, Easy, Healthful meals with REDI-WHEAT!



*The New Versatile, High Protein  
ENERGY FOOD*

10-ounce can..... C  
20-ounce can..... C

FREE RECIPE BOOKLET AT OUR STORES



**FREE Recipe Booklet**

**Pick Up Your Copy at our stores**

10-oz. can..... C  
20-oz. can..... C

Figure 11.--Suggested advertising mats furnished to supermarkets for newspaper advertising.



Figure 12.--Samples of the Redi Wheat were served to shoppers in selected super-markets during the promotion period of the market test.

standards in Wichita, such as plastic dust covers and tables for demonstrations, came to \$356.

Shelf talkers, recipe folders, pictures of Redi Wheat dishes, and point-of-purchase advertising cost \$2,336 for the market test area.

Indirect publicity costs amounted to \$2,477: Signs and displays \$277, news releases \$56, photographs and mats \$377, advertising agency charge for time and expenses \$1,238, information sheets and introductory dinner invitations \$140, recipe releases for restaurants \$389.

The above costs total \$15,929.

#### Second Phase -- A 6-Week Test Period

The 4-week introductory promotion was followed by the 6-week period of no promotion for Redi Wheat to assess the sales rate of the new product under conditions of no promotion. This no-promotion period ended on May 10. A new promotion for the second phase of the market test was scheduled for 3 weeks, to begin on May 11.





Figure 13.--80,000 samples of the Redi Wheat in swedish meat balls and tuna croquettes were prepared for the in-store taste sampling by shoppers.

A total of \$2,387 was allocated for this 3-week promotion consisting of (1) \$952 for 85 ten-second television spots, (2) \$750 for 150 one-minute radio commercials, and (3) \$685 for 150 lines of newspaper display advertising.

#### Third Phase Promotion

Promotion of the test product was omitted until the final week of the third phase of the market test. Radio, television, and newspaper advertising was used. In addition, two stores conducted in-store demonstrations for 8 hours on Saturday, September 23, 1961. Sales of Redi Wheat for the week of promotion averaged 0.48 case per store, an increase from 0.28 case for the preceding week. Removing the effects of this in-store demonstration, the final week sales were 0.29 case per store per week.

## In-store Demonstrations

Store demonstrations were carried out in 10 sample stores each weekend during the 4-week promotion period of the first phase of the market test. The Redi Wheat demonstrations were the first to be conducted under new regulations issued by the Wichita health authorities. Special plastic covers to protect the food samples from dust or handling were designed and plastic coated tables were purchased to meet the high sanitation requirements (fig. 14). All in-store demonstrators attended a special school conducted by the health department and were required to pass a prescribed physical examination.

The sales audit made it possible to measure the apparent effect of this type of promotional activity upon the sales of Redi Wheat. Audited sales of the test product clearly show the impact of in-store demonstrations. Sales in stores holding demonstrations during the 4-week promotion period accounted for over 66 percent of the total sales of the test product in that period in the 39 audit stores. Previous market test studies have indicated the importance of in-store demonstrations as a means of achieving a high initial rate of sale. In market testing potato flakes, a sales ratio of better than 5 to 1 favored demonstration stores during the promotion period. <sup>10/</sup> For the Redi Wheat test, demonstration stores outsold the control group of 11 nondemonstration stores at a sales ratio of better than 7 to 1 (fig. 5). Some of the differences between sales ratios may be attributed to differences in the types of products tested and to the relative effectiveness of other media of promotion. The in-store demonstration technique was a particularly effective means of introducing a completely new product such as bulgur (Redi Wheat) which had no counterpart in the existing food market. The name Redi Wheat or a generic description of "cooked whole kernel wheat" did not suggest a product image or usage to the housewife even though other forms of promotion may have been successful in creating an awareness of a new wheat food product. The firsthand observation by the customer of the actual product and its use in one or two recipes motivated them to purchase Redi Wheat for use in their homes.

As further check on the effectiveness of in-store demonstrations to achieve a high initial rate of sales, a control group of 11 audit stores was designated as nondemonstration stores. Sales of the market test product in the control stores were made as a result of promotional advertising other than in-store demonstration. <sup>11/</sup> Weekly sales of the test product in these 11 audit stores averaged 1.7 cases during the 4-week promotion period. Sales averaged 12.4 cases per week, in the 10 stores selected for a 2-day demonstration of the test product each week. Each week 10 stores were selected from a total of 28 audit stores for the weekly demonstration; thus 12 of the stores were selected for in-store demonstrations two times during the 4-week promotion period.

In the 18 audit stores (28 minus 10), weekly sales of the test product averaged 2.3 cases during the weeks demonstrations were not scheduled (fig. 5).

The sales pattern of the test product during the 6-week period of no promotion (March 31-May 10, 1961) indicates to some degree the carryover effect of the in-store demonstration technique on sales of the test product. The sales ratio during

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<sup>10/</sup> Dwoskin, Philip B. and Jacobs, Milton. Potato Flakes - A New Form of Dehydrated Mashed Potatoes: Market Position and Consumer Acceptance in Binghamton, Endicott, and Johnson City, New York. U. S. Dept. Agr., Mktg. Res. Rpt. 186, 54 pp., illus. July 1957. p. 15.

<sup>11/</sup> Except to the extent that demonstrations in one group of stores stimulated purchases in other stores.

this no-promotion period was 1.66 in favor of the demonstration stores: Average weekly sales were 0.864 case in the 28 demonstration stores and 0.521 case in the 11 nondemonstration stores (fig. 6).



Figure 14.--The plastic dust cover and demonstration table in a typical end aisle location in one of the sample supermarkets.

Product and weight	Inventory on display	Price (cents)	Quantity	Inventory not on display	Receipts since last inventory	Shipments received today	Store transfers		Preceding net inventory	New net inventory	Weekly sales (I+E+F+G-H-J)
							In	Out			
(A)	(C)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
Rice											
Quick Cooking and Prepared:											
Brand A Spanish Rice, 15 oz.....	15	0.19	15	24	24	0	0	24	49	39	10
Brand B Spanish Rice, 15 oz.....	19	.19	19	0	24	0	0	0	15	19	20
Brand D Spanish Rice, 8 oz.....	25	2/29	25	0	0	0	0	0	29	25	4
Brand F Spanish Quick Cooking, 6 oz.....	35	.33	35	36	27	0	0	0	56	71	12
Brand F Precooked, 4 5/8 oz.....	62	.17	62	0	72	0	36	0	25	98	35
Brand F Precooked, 13 7/8 oz.....	21	.45	21	24	48	0	0	0	10	45	13
Brand F Precooked, 23 1/8 oz.....	23	.65	23	0	0	0	0	0	32	23	9

Sales and Prices During Market Test

Table 6.--Average weekly sales, per store, of Redi Wheat and other products audited in 30 sample stores, Wichita, Kans., February 20 to June 27, 1961

Products	Pre-test week	Average during weeks --		Products	Pre-test week	Average during weeks --	
		1-10	11-16			1-10	11-16
	Cases	Cases	Cases		Cases	Cases	Cases
<b>Bulgur: (3 items)</b>				<b>Spaghetti and macaroni:</b>			
1. Unseasoned Redi Wheat, 11 oz.....	---	1.29	0.20	(33 items)			
2. Seasoned Redi Wheat, 12 oz.....	---	1.09	.16	Complete all spaghetti dinners:			
Total test product:	---	2.38	.36	1. _____	0.06	0.63	---
3. Other.....	0.05	.04	.03	2. _____	.29	.31	---
				3. _____	.12	.14	---
<b>Canned specialty beans</b>				Dry spaghetti dinners:			
(1 item).....	.57	.68	.68	1. _____	.14	.14	---
				2. _____	.42	.45	---
<b>Rice: (22 items)</b>				Dry macaroni and cheese dinners:			
<b>Canned spanish rice:</b>				1. _____	1.53	1.61	---
1. _____	.16	.22	---	2. _____	.51	.50	---
2. _____	.21	.30	---	<b>Canned spaghetti:</b>			
3. _____	.14	.11	---	1. _____	1.30	1.33	---
4. _____	.22	.17	---	2. _____	.65	.67	---
5. _____	.08	.09	---	3. _____	.41	.47	---
6. _____	.06	.05	---	4. _____	.18	.12	---
				5. _____	.16	.17	---
<b>Dry rice specialties:</b>				6. _____	.15	.15	---
1. _____	.11	.10	---	7. _____	.12	.11	---
2. _____	.09	.10	---	8. _____	3.32	2.45	---
				9. _____	1.05	.57	---
<b>Quick cooking rice:</b>				10. _____	.65	.86	---
1. _____	.49	.39	.29	11. _____	.24	.27	---
2. _____	.45	.36	.28	<b>Canned spaghetti and meat balls:</b>			
3. _____	.50	.30	.22	1. _____	.12	.16	---
				2. _____	.28	.27	---
<b>Long dry rice:</b>				3. _____	.11	.11	---
1. _____	.25	.26	.18	4. _____	.19	.19	---
2. _____	.12	.10	.12	5. _____	.17	.17	---
				6. _____	.10	.10	---
<b>Short dry rice:</b>				7. _____	.83	.83	---
1. _____	.58	.55	.37	<b>Canned spaghetti with meat or ground beef:</b>			
2. _____	.48	.43	.33	1. _____	.23	.20	---
				2. _____	.02	.01	---
<b>Brown dry rice:</b>				3. _____	.02	.03	---
1. _____	.10	.09	.07	<b>Canned macaroni:</b>			
2. _____	.07	.09	.06	1. _____	.38	.38	---
				2. _____	.08	.05	---
<b>Wild rice:</b>				3. _____	.10	.14	---
1. _____	.005	.04	---	4. _____	.07	.03	---
2. _____	.03	.03	---	5. _____	.04	.12	---
3. _____	.0	.01	---				
4. _____	.005	.01	---				
5. _____	.02	.01	---				

Table 7.--Average unit sales per store of products audited in 39 sample stores, Wichita, Kans., by weeks, February 20 to May 4, 1961 1/

Week	Wheat bulgur		All wheat		Rice		Prepared		Canned		Total
	Unseasoned : 11 oz.	Seasoned : 12 oz.	Redi Wheat : 12 oz.	bulgur (3 products)	(22 products)	macaroni dinners : (33 products)	spaghetti and specialty : (1 product)	beans (59 products)	Units	Units	
Pretest.....	Units ---	Units ---	Units 1.3	Units 1.3	Units 71.3	Units 180.3	Units 13.7	Units 266.6	Units	Units	Units
1.....	73.6	62.4	136.2	136.2	76.8	223.5	17.3	453.8	17.3	17.3	453.8
2.....	66.1	61.1	127.2	127.2	70.1	188.2	12.0	397.5	12.0	12.0	397.5
3.....	67.1	52.2	119.4	119.4	76.3	201.0	13.3	410.0	13.3	13.3	410.0
4.....	46.5	36.1	82.6	82.6	59.6	171.3	13.3	326.8	13.3	13.3	326.8
Average, weeks :											
1-4.....	63.3	52.9	116.3	116.3	70.7	196.0	14.0	397.0	14.0	14.0	397.0
5.....	21.0	18.2	39.2	39.2	64.5	169.3	17.3	290.6	17.3	17.3	290.6
6.....	12.7	13.8	26.6	26.6	61.8	178.8	17.3	284.5	17.3	17.3	284.5
7.....	9.0	8.2	17.2	17.2	65.6	170.2	18.9	271.9	18.9	18.9	271.9
8.....	5.2	4.5	9.7	9.7	53.0	156.4	14.5	233.6	14.5	14.5	233.6
9.....	5.4	4.3	9.7	9.7	65.7	187.9	17.9	281.2	17.9	17.9	281.2
10.....	4.6	3.7	8.4	8.4	61.7	170.1	20.9	261.1	20.9	20.9	261.1
Average, weeks :											
5-10.....	9.6	8.8	18.5	18.5	62.1	172.1	17.8	270.5	17.8	17.8	270.5
Average, weeks :											
1-10.....	31.1	26.4	57.6	57.6	65.5	181.7	16.3	321.1	16.3	16.3	321.1

1/ Unit of product as appearing on retail store shelf.

Table 8.--Total sales (in pounds) of products audited in 39 sample stores, Wichita, Kans., by weeks, February 20 to May 4, 1961

Week	Wheat bulgur		All wheat bulgur (3 products)	Rice products (22 products)	Prepared spaghetti and macaroni dinners (33 products)	Canned specialty beans (1 product)	Total (59 products)
	Unseasoned Redi Wheat 11 oz.	Seasoned Redi Wheat 12 oz.					
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Pretest.....	---	---	4	2,024	6,321	535	8,884
1.....	1,823	1,685	3,512	2,201	7,528	676	13,917
2.....	1,726	1,742	3,469	2,004	6,397	467	12,337
3.....	1,798	1,527	3,329	2,187	6,923	520	12,960
4.....	1,246	1,054	2,302	1,695	5,767	506	10,270
Average, weeks							
1-4.....	1,648	1,502	3,153	2,022	6,654	542	12,371
5.....	564	531	1,096	1,868	5,874	658	9,496
6.....	339	404	750	1,711	6,217	659	9,337
7.....	241	240	482	2,221	6,003	719	9,425
8.....	140	132	272	1,494	5,510	564	7,840
9.....	144	126	273	1,888	6,694	697	9,552
10.....	124	108	236	1,730	5,950	816	8,732
Average, weeks							
5-10.....	259	257	518	1,819	6,041	685	9,064
Average, weeks							
1-10.....	814	755	1,572	1,900	6,286	628	10,387

Table 9.--Quantity and value of sales of products audited in 39 sample stores, Wichita, Kansas, February 20 to May 4, 1961

Product	Quantity sold						Value of sales						
	Unit, as appearing on retail store shelf:	Pretest week	Average, weeks 1-4	Average, weeks 5-10	Average, weeks 1-10	Pretest week	Average, weeks 1-4	Average, weeks 5-10	Average, weeks 1-10	Pretest week	Average, weeks 1-4	Average, weeks 5-10	Average, weeks 1-10
Total bulgur.....	Unit	4	4,403	721	2,194	\$ 1	\$ 815	\$ 134	\$ 406				
Total Redi Wheat....	Unit	---	4,401	719	2,192	---	814	133	405				
Unseasoned.....	11 oz. can	---	2,398	376	1,185	---	443	70	219				
Seasoned.....	12 oz. can	---	2,003	343	1,007	---	371	63	186				
Bulgur, dry.....	Box	4	2	2	2	1	1	1	1				
Total rice.....	Unit	2,266	2,265	1,955	2,079	673	645	557	593				
Quick cooking and prepared.....	Unit	1,412	1,418	1,174	1,272	435	413	342	370				
Regular dry rice.....	Package	837	836	768	795	224	220	201	209				
Wild rice.....	Unit	17	11	13	12	15	13	15	14				
Total prepared spaghetti and macaroni dinners.....	Unit	7,029	7,640	6,707	7,080	1,489	1,621	1,461	1,525				
Dry dinners.....	Package	2,430	3,018	2,459	2,682	605	736	611	661				
Canned dinners.....	Can	4,599	4,622	4,248	4,398	884	885	850	864				
Beans, specialty, canned.....	Can	535	542	685	628	106	108	136	124				



Table 10.--Average price per unit of products audited in 39 sample stores, Wichita, Kans., February 20 to May 4, 1961 1/

Week	Wheat bulgur			Rice (22 products)	Prepared spaghetti and macaroni dinners (33 products)	Canned and specialty beans (1 product)	Total (59 products)
	Unseasoned Redi Wheat 11 oz.	Seasoned Redi Wheat 12 oz.	All wheat bulgur (3 products)				
Pretest.....	---	---	\$0.350	\$0.297	\$0.212	\$0.199	\$0.231
1.....	\$0.185	\$0.185	.185	.283	.210	.200	.213
2.....	.185	.185	.185	.288	.215	.197	.216
3.....	.185	.185	.185	.278	.214	.198	.215
4.....	.185	.185	.185	.291	.211	.198	.216
5.....	.185	.185	.185	.289	.220	.197	.227
6.....	.185	.185	.185	.283	.219	.197	.226
7.....	.185	.185	.185	.284	.222	.197	.231
8.....	.185	.185	.185	.285	.217	.199	.228
9.....	.185	.185	.185	.286	.213	.200	.225
10.....	.185	.185	.185	.285	.216	.197	.227
Average, weeks 1-10.....	.185	.185	.185	.285	.215	.198	.221

1/ Unit of product as appearing on retail store shelf.

Table 11.--Average price per pound equivalent of sales of products audited in 39 sample stores, Wichita, Kans., February 20 to May 4, 1961

Week	Wheat bulgur			Rice (22 products)	Prepared spaghetti and macaroni dinners (33 products)	Canned and specialty beans (1 product)	Total (59 products)
	Unseasoned Redi Wheat 11 oz.	Seasoned Redi Wheat 12 oz.	All wheat bulgur (3 products)				
Pretest.....	---	---	\$0.350	\$0.333	\$0.235	\$0.199	\$0.255
1.....	\$0.269	\$0.247	.258	.314	.243	.200	.256
2.....	.269	.247	.258	.322	.246	.197	.260
3.....	.269	.247	.259	.315	.242	.198	.257
4.....	.269	.247	.259	.324	.244	.198	.258
5.....	.269	.247	.258	.314	.248	.197	.258
6.....	.269	.247	.258	.325	.245	.197	.257
7.....	.269	.247	.258	.325	.245	.197	.258
8.....	.269	.247	.258	.319	.240	.199	.253
9.....	.269	.247	.261	.313	.233	.199	.247
10.....	.269	.247	.260	.319	.241	.197	.253

## APPENDIX B -- HOUSEHOLD SURVEY

### Technical Note

#### Sampling Procedure

The sample used in this survey was designed so as to be substantially representative of the Wichita Urbanized Area. A systematic sample of every 30th household was drawn from the residential telephone listings in those exchanges covered by the Wichita Urbanized Area. Since better than 9 out of 10 households in this area had been telephone subscribers in 1960, it appeared reasonable to assume that a sample of telephone subscribers would provide representative information for the area.

The initial sample size was set to yield an expected number of 300 users, on the assumption that the rate of use would be about 10 percent of all households. The actual rate of use turned out to be 18 percent, yielding 569 users. The number of user households was therefore systematically subsampled, prior to interview, in order to reduce the number of households interviewed to approximately the expected number.

#### Sample Variability

Data obtained from sample surveys are subject to sampling error and may differ somewhat from the results of a complete enumeration. Statistical techniques are, however, available for estimating the magnitude of this difference. For example, survey results indicate that 18 percent of the homemakers in the Wichita Urbanized Area had purchased the test product at least once at the time of the original interview. The chances are about 95 out of 100 that the value obtained from a complete enumeration would fall between 19.5 percent and 16.6 percent.

Estimates of the magnitude of the error due to sampling are also required when comparisons are made between subgroups within the sample. For example, survey results indicate that, regardless of the kind purchased and used, if only one kind were to be sold, 42 percent of the users would prefer the unseasoned Redi Wheat while only 18 percent of the users would prefer the seasoned kind. The chances are less than 1 in 1,000 that a difference this large would occur as a result of chance variability, that is, would occur if there were not, in fact, a difference in the preference for one brand over the other.

The formula used to determine confidence intervals is:

$$\sqrt{\frac{pq}{n}}$$

where p is the proportion of respondents possessing a given characteristic or opinion,

q is the proportion of respondents not possessing the characteristic or opinion,

q = (1-p), and

n is the number of cases.

The formula used to determine the significance of differences between subgroups within the sample is:

$$\sqrt{\frac{p_1q_1}{n_1} + \frac{p_2q_2}{n_2}}$$

where p, q, and n have the same meanings as before and the subscripts refer to the different subgroups.

Replies to Questions in Household Survey

Table 12.--Spontaneous replies to the question: "How did you find out about Redi Wheat?"

Replies	Purchasers	Aware nonpurchasers	All respondents
	Percent <u>1/</u>	Percent <u>1/</u>	Percent <u>1/</u>
From newspaper, radio, or television.....	46	57	55
Store demonstration.....	13	6	7
Store shelf or display.....	11	9	10
Friend or acquaintance.....	7	8	8
Other family member.....	7	5	5
Other.....	4	2	3
Not ascertained.....	15	16	16
Number of respondents <u>2/</u>	418	1,668	2,086

1/ Percentages add to more than 100 because some homemakers gave more than one reply.

2/ These numbers represent the 314 purchasers and the 417 aware non-purchasers inflated by the reciprocal of their sampling fractions so that they can be added.

Table 13.--Replies to the question: "Did you also happen to see or hear anything about it in . . .?"

Replies	Purchasers	Aware nonpurchasers	All respondents
	Percent <u>1/</u>	Percent <u>1/</u>	Percent <u>1/</u>
From newspaper, radio, or television.....	44	31	33
Store demonstration.....	32	20	22
Store shelf or display.....	60	43	46
Given recipe booklet.....	55	14	22
Friend or acquaintance.....	21	20	21
No other way.....	7	12	11
Number of respondents <u>2/..</u>	418	1,668	2,086

1/ Percentages add to more than 100 because some homemakers gave more than one reply.

2/ These numbers represent the 314 purchasers and the 417 aware non-purchasers inflated by the reciprocal of their sampling fractions so that they can be added.

Table 14.--.Combined replies indicating source of homemakers' awareness of Redi-Wheat

Replies	Purchasers	Aware nonpurchasers	All respondents
	Percent <u>1/</u>	Percent <u>1/</u>	Percent <u>1/</u>
From newspaper, radio, or television.....	90	88	88
Store demonstration.....	45	25	29
Store shelf or display.....	71	52	56
Given recipe booklet.....	55	14	22
Friend or acquaintance.....	28	29	28
Other family member.....	7	5	5
Other.....	4	3	3
Not ascertained, do not know:	15	16	16
Number of respondents <u>2/</u> ..:	418	1,668	2,086

1/ Percentages add to more than 100 because some homemakers gave more than one reply.

2/ These numbers represent the 314 purchasers and the 417 aware non-purchasers inflated by the reciprocal of their sampling fractions so that they can be added.

Table 15.--Sources of homemakers' awareness of 3 products, Potato Flakes, Insta Rice, and Redi Wheat

Source of awareness	Potato Flakes		Insta Rice		Redi Wheat	
	Users	Aware non-purchasers	Users	Aware non-purchasers	Purchasers	Aware non-purchasers
	Pct. 1/	Pct. 1/	Pct. 1/	Pct. 1/	Pct. 1/	Pct. 1/
From newspaper, radio, or television.....	83	64	35	52	90	88
Store demonstration.....	82	45	{ 36	39	45	26
Store shelf or display.....	---	---	{ 33	21	71	52
Recipe booklet.....	---	---	---	---	55	14
Friend or acquaintance.....	43	43	{ ---	---	28	28
Other family member.....	---	---	{ ---	---	7	5
Other.....	---	---	11	8	4	2
Not ascertained, don't know:	---	---	---	---	15	16
Number of respondents....	294	278	126	151	418	1,668

1/ Percentages add to more than 100 because some homemakers gave more than one reply. Brackets indicate results presented under a single category in original study.

Table 16.--Replies to the question: "What would you say were the main reasons that you first purchased Redi-Wheat?"

Replies	Purchasers
	Percent <u>1/</u>
Wanted to try it.....	57
Liked the taste of a sample.....	16
Like wheat (generally).....	10
It is nutritious.....	12
It is a Kansas product.....	11
It was recommended.....	9
Received it as a gift.....	4
Other.....	17
Not ascertained.....	<u>2/</u>
Number of respondents.....	314

1/ Percentages add to more than 100 because some homemakers gave more than one reply.

2/ Less than 1 percent.

Table 17.--Replies to the question: "What would you say were the main reasons that you purchased it again?"

Replies	Purchasers who had bought more than once
	Percent <u>1/</u>
Liked it in the recipe in which we used it.....	23
Liked it (generally).....	19
Felt that it was nutritious.....	18
Liked the flavor.....	16
Found it easy to fix.....	14
Found it a good filler, meat extender, etc. ....	12
Family liked it.....	11
Wanted to try it other ways.....	9
Other.....	17
Not ascertained.....	9
Number of respondents.....	57

1/ Percentages add to more than 100 because some homemakers gave more than one reply.

Table 18.--Replies to the question: "What were the reasons that you did not buy again?"

Replies	Homemakers who had purchased once only
	<u>Percent</u> <u>1/</u>
Still had some on hand.....	22
Had not yet used it <u>2/</u> .....	20
Respondent or family did not like it.....	18
Use it for certain dishes or at certain intervals only.....	13
Did not like the texture.....	5
Did not like the taste.....	5
Other.....	9
Not ascertained.....	12
Number of respondents.....	257

1/ Percentages add to more than 100 because some homemakers gave more than one reply.

2/ This question and questions 7-24 of the attached questionnaire were not asked of those who had not yet used the Redi Wheat that they had purchased. They are included in this table for purposes of reasonableness and consistency.

Table 19.--Aware nonpurchasers' replies to the question: "Do you plan to purchase any Redi Wheat?"

Replies	Aware nonpurchasers
	<u>Percent</u>
Yes.....	46
Perhaps, do not know, not sure.....	33
No.....	18
Not ascertained.....	3
Total.....	100
Number of respondents.....	417

Table 20.--Reasons why aware nonpurchasers do not plan to purchase or are uncertain about purchasing

Reasons	Aware nonpurchasers who do not plan to buy or are not certain of buying
	<u>Percent</u>
Respondent or family does not like it.	19
Had given it no thought.....	10
Do not know how to use it.....	10
Do not cook much at home.....	10
On a diet, cannot use cereals.....	10
Do not like to try new foods.....	3
Other.....	4
Not ascertained, do not know.....	34
<b>Total.....</b>	<b>100</b>
<b>Number of respondents.....</b>	<b>211</b>

Table 21.--Replies to the question: "What kind of food do you think Redi Wheat is? I mean what is it like?"

Replies	Aware nonpurchasers
	<u>Percent <sup>1/</sup></u>
Do not know.....	25
Breakfast food cereal.....	24
Whole wheat.....	10
Wheat (general).....	9
Filler--extender.....	10
Wheat germ.....	4
Cracked wheat.....	4
Like rice.....	3
Protein food supplement.....	3
Like flour.....	1
Other.....	3
Not ascertained.....	6
<b>Number of respondents.....</b>	<b>417</b>

<sup>1/</sup> Percentages add to more than 100 because some homemakers gave more than one reply.



Table 22.--Replies to the question: "What kind of Redi Wheat have you purchased?"

Kind purchased	Purchasers
	<u>Percent</u>
Seasoned.....	28
Unseasoned.....	36
Both.....	36
Not ascertained.....	<u>1/</u>
 Total.....	 100
 Number of respondents.....	 314

1/ Less than 1 percent.

Table 23.--Replies to the question: "Before you purchased, did you notice that there was both a seasoned and an unseasoned Redi Wheat?"

Replies	Purchasers
	<u>Percent</u>
Noticed before purchase.....	74
Noticed after purchase, before use..	6
Did not notice before purchase or use.....	10
Not ascertained, do not know.....	10
 Total.....	 100
 Number of respondents.....	 314

Table 24.--Classification of users in terms of their replies to the question: "In general, what do you think of Redi Wheat?"

Replies	Had used--		Total
	Seasoned	Unseasoned	
	Percent	Percent	Percent
Expressed approval only.....	42	42	42
Expressed both likes and dislikes...	38	43	41
Expressed disapproval only.....	20	15	17
Total.....	100	100	100
Number of respondents.....	143	158	301

Table 25.--Replies to the question: "In general, what did you think of Redi Wheat?"

Reasons for liking	Had used--		Total
	Seasoned	Unseasoned	
	Percent <u>1/</u>	Percent <u>1/</u>	Percent <u>1/</u>
<u>Health</u> : it's nutritious, has vitamins, good for you, etc. ....	38	43	41
<u>Taste</u> : good flavor, nutty flavor, etc. ....	39	33	36
<u>Variety of uses</u> : good in many dishes, adds variety, etc. ....	32	33	33
<u>Convenience</u> : easy to fix, etc. ....	27	22	24
<u>Economy</u> : money saver, food extender, etc. ....	22	16	18
<u>Texture</u> : chewy, moist, good texture, etc. ....	4	5	4
Other.....	16	12	13
Number of respondents.....	114	135	249

1/ Percentages add to more than 100 because some homemakers gave more than one reply.

Table 26.--Replies to the question: "In general, what did you think of Redi Wheat?"

Things respondents disliked	Had used--		Total
	Seasoned	Unseasoned	
	Percent <u>1/</u>	Percent <u>1/</u>	Percent <u>1/</u>
<u>Health reasons</u> : too fattening, too rich, etc. ....	6	---	3
<u>Taste</u> : tasteless, did not like flavor, etc. ....	30	22	26
<u>Texture</u> : kernels too big, too hard, chewy, rubbery, etc. ....	24	47	36
<u>Variety of uses</u> : not good in certain dishes, not versatile, etc. ...	10	9	9
<u>Ease of preparation</u> : needs longer cooking, more water, recipe not as good, etc. ....	37	27	32
Other.....	20	29	25
Number of respondents.....	83	91	174

1/ Percentages add to more than 100 because some homemakers gave more than one reply.

Table 27.--Classification of user's family in terms of the replies to the question: "How about the rest of the family, what do they think of Redi Wheat?"

The rest of the user's family	Had used--		Total
	Seasoned	Unseasoned	
	Percent	Percent	Percent
Expressed approval only.....	50	41	45
Expressed both likes and dislikes....	16	21	19
Expressed disapproval only.....	27	31	29
Respondent was only person in family:	7	7	7
Total.....	100	100	100
Number of respondents.....	143	158	301

Table 28.--Classification of replies to the question: "How about the rest of the family, what do they think of Redi Wheat?"

Classification of user's family	Had used--		Total
	Seasoned	Unseasoned	
	Percent	Percent	Percent
<u>The rest of the family adults:</u>			
All liked.....	52	52	52
All disliked.....	27	27	27
Some liked, some disliked.....	1	1	1
Not ascertained.....	13	13	13
<u>Family had no other adult members...</u>	1	1	1
<u>Respondent was only family member...</u>	6	6	6
Total.....	100	100	100
Number of respondents.....	143	158	301
<u>Households containing children:</u>			
All of the children liked.....	49	39	44
None of the children liked.....	37	47	42
Some liked, some disliked.....	1	10	6
Not ascertained.....	13	4	8
Total.....	100	100	100
Number of respondents.....	82	94	176

Table 29.--Replies to the question: "How about the rest of the family, what do they think of Redi Wheat?"

Replies	Had used--		Total
	Seasoned	Unseasoned	
	Percent	Percent	Percent
<u>Things the rest of the family liked:</u>			
"Just liked," no other reason given.....	79	83	81
Flavor.....	9	9	9
Healthful qualities.....	1	1	1
Not ascertained.....	11	7	9
Total.....	100	100	100
Number of respondents.....	94	98	192
<u>Things the rest of the family disliked:</u>			
"Just disliked," no other reason given.....	27	16	21
Texture.....	19	35	29
Flavor.....	19	16	17
Appearance.....	10	13	12
Size of kernels.....	2	3	2
Unfamiliar, different.....	5	7	6
Affects health (adversely).....	2	1	1
Not ascertained.....	16	9	12
Total.....	100	100	100
Number of respondents.....	62	82	144

Table 30.--Replies to the question: "How about the size of the can--  
how many servings did you get from one can?"

Number of servings obtained	Had used--		Total
	Seasoned	Unseasoned	
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
1-3.....	11	15	13
4-5.....	17	23	20
6-8.....	30	33	32
9-12.....	29	15	21
13 and over.....	2	1	2
Not ascertained, do not know.....	11	13	12
Total.....	100	100	100
Number of respondents.....	143	158	301

Table 31.--Replies to the question: "Is that about the right size for  
your household, or would you prefer a larger or a smaller can?"

Replies	Had used--		Total
	Seasoned	Unseasoned	
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Right size.....	64	72	68
Prefer larger can.....	1	6	4
Prefer smaller can.....	29	18	23
Not ascertained, do not know.....	6	4	5
Total.....	100	100	100
Number of respondents.....	143	158	301

Table 32.--Replies to the question: "About how much (or "Do you know how much--") did it cost per can?"

Replies	Users	Aware nonpurchasers
	<u>Percent</u>	<u>Percent</u>
Gave the correct price.....	73	4
Gave a higher price.....	6	7
Gave a lower price.....	3	1
Do not know or do not remember.....	12	84
Not ascertained.....	6	4
Total.....	100	100
Number of respondents.....	262	417

Table 33.--Replies to the question: "Considering the cost of food nowadays, does this price seem to be in line?"

Replies	Users	Aware nonpurchasers
	<u>Percent</u>	<u>Percent</u>
Yes.....	68	6
No.....	13	3
Do not know.....	13	89
Not ascertained.....	6	2
Total.....	100	100
Number of respondents.....	262	417

Table 34.--Replies to the question of whether or not the homemaker had leftovers after using Redi Wheat the first time and whether or not she had any difficulty in keeping the leftovers fresh until they were used again

Replies	Users
	<u>Percent</u>
Used it all the first time.....	51
Had leftovers.....	48
Had no difficulty keeping it fresh.:	<u>1/</u> 62
Had difficulty keeping it fresh.....:	<u>1/</u> 13
Threw the leftovers away.....:	<u>1/</u> 19
Difficulty in keeping not ascer- tained.....:	<u>1/</u> 6
Not ascertained, do not know.....	1
Total.....	100
Number of respondents.....	262

1/ Based on the total who had leftovers.

Table 35.--Number of dishes in which respondent had used Redi Wheat

Number of dishes in which respondent had used Redi Wheat	Had used--		Total
	Seasoned	Unseasoned	
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
1 dish only.....	75	60	67
2 dishes.....	18	25	22
3 or more dishes.....	7	15	11
Total.....	100	100	100
Number of respondents.....	143	158	301



Table 36.--Replies to the question: "In what ways have you used or served Redi Wheat?"

Ways in which used	Had used--		Total
	Seasoned	Unseasoned	
	<u>Pct. 1/</u>	<u>Pct. 1/</u>	<u>Pct. 1/</u>
As a meat extender.....	70	61	65
As a breakfast food.....	8	45	28
In a casserole.....	10	10	10
As a separate vegetable.....	10	9	9
As a separate side dish.....	8	9	9
In a salad.....	4	6	5
In a soup.....	5	4	4
In dressing.....	6	1	4
In stuffed peppers.....	5	1	3
Other.....	3	9	6
Number of respondents.....	143	158	301

1/ Percentages add to more than 100 because some homemakers gave more than one reply.

Table 37.--Comparison of Redi Wheat with 4 other types of products

Redi Wheat is - - - in terms of:	White potatoes	Rice	Macaroni or spaghetti	Baked beans
	Pct.	Pct.	Pct.	Pct.
<u>Cost per serving, Redi Wheat is:</u>				
Better than.....	11	14	10	18
About the same.....	27	30	29	26
Not as good as.....	49	38	45	41
Never serve, not ascertained....	13	18	16	15
Total.....	100	100	100	100
<u>Variety of uses, Redi Wheat is:</u>				
Better than.....	23	19	20	42
About the same.....	21	37	30	17
Not as good as.....	44	26	34	27
Never serve, not ascertained....	12	18	16	14
Total.....	100	100	100	100
<u>Ease of preparation, Redi Wheat is:</u>				
Better than.....	57	38	42	41
About the same.....	12	28	24	24
Not as good as.....	20	17	20	20
Never serve, not ascertained....	11	17	14	15
Total.....	100	100	100	100
<u>Family preference, Redi Wheat is:</u>				
Better than.....	10	23	17	20
About the same.....	20	21	22	19
Not as good as.....	58	37	45	48
Never serve, not ascertained....	12	19	16	13
Total.....	100	100	100	100
Number of respondents.....	262	262	262	262

Table 38.--Replies to the question: "Did you use Redi Wheat in place of something else in this dish? If yes, what?"

Replies	Had used--		Total
	Seasoned	Unseasoned	
	<u>Pct. 1/</u>	<u>Pct. 1/</u>	<u>Pct. 1/</u>
Bread, breadcrumbs.....	34	22	28
Crackers.....	20	12	16
Cereal.....	10	31	21
Rice.....	8	10	9
Potatoes.....	7	8	7
Other.....	7	13	10
Not ascertained, don't know.....	17	25	21
Nothing--simply followed the recipe.....	14	15	15
Number of respondents.....	143	158	301

1/ Percentages add to more than 100 because some homemakers gave more than one reply.

Table 39.--Replies to the question: "Do you think that you will continue to serve Redi Wheat or not?"

Replies	Had used--		Total
	Seasoned	Unseasoned	
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Yes.....	64	72	68
No.....	18	13	15
Maybe--not sure.....	10	11	11
Not ascertained.....	8	4	6
Total.....	100	100	100
Number of respondents.....	143	158	301

Table 40.--Reasons given by users for not planning to continue serving Redi Wheat

Reasons	Users who do not plan to buy again
	<u>Percent</u>
Just did not like it.....	50
Did not like taste, texture or way it cooked.....	29
No reason given.....	21
Total.....	100
Number of respondents.....	78

Table 41.--Replies to the question: "About how often do you think that you would like to serve it to your household?" Asked of respondents who plan to continue serving Redi Wheat.

Replies	Had used--		Total
	Seasoned	Unseasoned	
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Two or more times a week.....	25	30	28
Once a week.....	29	26	27
Two or more times a month.....	16	15	16
Once a month.....	8	10	9
Less than once a month.....	3	4	3
Don't know.....	11	4	7
Not ascertained.....	8	11	10
Total.....	100	100	100
Number of respondents.....	91	113	204

Table 42.--Replies to the question: "Incidentally, about how often do you serve \_\_\_\_\_?"

Replies	White	Rice	Macaroni or	Baked
	potatoes		spaghetti	beans
	<u>Pct.</u>	<u>Pct.</u>	<u>Pct.</u>	<u>Pct.</u>
Three or more times a week.....	66	5	8	1
Once or twice a week.....	23	28	34	19
Once or twice a month.....	5	34	33	31
Less often.....	2	19	11	31
Never serve.....	2	12	11	15
Not ascertained.....	2	2	3	3
Total.....	100	100	100	100
Number of respondents.....	301	301	301	301

Table 43.--Replies to the question; "Are there any new ways in which you will serve it?" Asked of those who plan to continue serving Redi Wheat

Replies	Had used--		Total
	Seasoned	Unseasoned	
	Percent	Percent	Percent
No, no new ways.....	11	16	14
Yes, plan to use it in new ways as:..	66	73	70
Not ascertained, do not know.....	23	11	16
Total.....	100	100	100
Number of respondents.....	91	113	204
New ways planned:			
Salad.....	13	10	11
Breakfast cereal.....	13	16	15
Meat loaf.....	8	10	9
Meat balls.....	8	10	9
Casserole.....	5	10	8
Dessert.....	5	8	7
Other.....	15	13	14
Not ascertained, do not know.....	32	24	27
Total.....	100	100	100
Number of respondents.....	60	83	143

Table 44.--Replies to the question: "Are there any ways in which you will not serve it again?" Asked of those who plan to continue serving Redi Wheat

Replies	Had used--		Total
	Seasoned	Unseasoned	
	Percent	Percent	Percent
No.....	63	59	61
Yes.....	9	8	8
Not ascertained, do not know.....	28	33	31
Total.....	100	100	100
Number of respondents.....	91	113	204

Table 45.--Replies to the question: "Would you purchase more Redi Wheat if it cost less per can?" Asked of those who plan to continue serving Redi Wheat

Replies	Had used--		Total
	Seasoned	Unseasoned	
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
No.....	45	38	41
Yes.....	35	38	37
Not ascertained, do not know.....	20	24	22
Total.....	100	100	100
Number of respondents.....	91	113	204

Table 46.--Replies to the question: "Regardless of which kind you purchased, if only 1 kind were available, would you prefer a ---?"

Kind preferred	Had used--			Total
	Seasoned	Unseasoned only	Both kinds	
	<u>Pct.</u>	<u>Pct.</u>	<u>Pct.</u>	<u>Pct.</u>
Seasoned only.....	33	4	20	18
Unseasoned only.....	23	56	49	42
Does not matter.....	22	18	26	21
Neither.....	10	7	5	8
Do not know.....	5	8	---	5
Not ascertained.....	7	7	---	6
Total.....	100	100	100	100
Number of respondents.....	104	119	39	262

Sample Households

Table 47.--Composition of sample households

Number of persons in household	Purchasers	Nonpurchasers	
		Aware	Nonaware
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
One.....	6	8	11
Two.....	29	21	29
Three.....	21	21	16
Four.....	19	24	14
Five.....	12	13	13
Six or more.....	12	12	7
Not ascertained.....	1	1	10
<b>Total.....</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>Number of respondents.....</b>	<b>314</b>	<b>417</b>	<b>430</b>

Table 48.--Number of persons under 18 years of age in sample households

Number of persons in household under 18 years of age	Purchasers	Nonpurchasers	
		Aware	Nonaware
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
None.....	43	35	41
One.....	17	19	17
Two.....	21	21	13
Three.....	9	12	10
Four or more.....	8	11	7
Not ascertained.....	2	2	12
<b>Total.....</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>Number of respondents.....</b>	<b>314</b>	<b>417</b>	<b>430</b>



Table 49.--Highest grade of school completed by head of sample households

Education	Purchasers	Nonpurchasers	
		Aware	Nonaware
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
None or grammar school.....	11	9	16
Some high school.....	7	7	10
Completed high school.....	38	44	31
Some college.....	16	11	8
Completed college.....	24	25	17
Not ascertained.....	4	4	18
Total.....	100	100	100
Number of respondents....	314	417	430

Table 50.--Average weekly food costs for the households in the sample

Average weekly food costs of household	Purchasers	Nonpurchasers	
		Aware	Nonaware
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
\$5 - 9.....	2	3	5
10 - 14.....	7	7	6
15 - 19.....	12	12	12
20 - 24.....	22	13	12
25 - 29.....	18	19	16
30 - 34.....	12	14	7
35 - 39.....	8	10	8
40 - 44.....	4	6	2
45 and over.....	5	6	6
Not ascertained.....	10	10	26
Total.....	100	100	100
Number of respondents....	314	417	430

Table 51.--Total family income of sample households

Total family income	Purchasers	Nonpurchasers	
		Aware	Nonaware
	Percent	Percent	Percent
Under \$1,000.....	1	1	2
1,000 - 2,999.....	4	4	6
3,000 - 4,999.....	10	9	8
5,000 - 6,999.....	24	21	16
7,000 - 8,999.....	13	14	8
9,000 and over.....	16	14	9
Not ascertained.....	32	37	51
Total.....	100	100	100
Number of respondents....	314	417	430

Table 52.--Number of nonfamily members in sample households

Number of nonfamily members: in household	Purchasers	Nonpurchasers	
		Aware	Nonaware
	Percent	Percent	Percent
None.....	91	90	83
One.....	2	4	3
Two.....	<u>1</u> / <sub>1</sub>	2	1
Three or more.....	<u>1</u> / <sub>1</sub>	<u>1</u> / <sub>1</sub>	<u>1</u> / <sub>1</sub>
Not ascertained.....	7	4	13
Total.....	100	100	100
Number of respondents....	314	417	430

1/<sub>1</sub> Less than 1 percent.

Questionnaires

:  
: With the exception of check-box material, office-record infor- :  
: mation, and free-answer space, the questionnaires used for this study :  
: are reproduced below in entirety. :  
:

Budget Bureau No. 40-6124  
Approval Expires 6-30-61

Telephone Interview

Name \_\_\_\_\_

Address \_\_\_\_\_

Telephone No. \_\_\_\_\_

Name of person who purchases food \_\_\_\_\_

Hello, my name is \_\_\_\_\_. I am with the U. S. Department of Agriculture. We are taking a consumer survey in Wichita. May I speak with the person in your household who is primarily responsible for buying and cooking the food? (If not at home, arrange to call back.)

Repeat introduction if necessary - asking "are you the person in your household -- etc."

Then - Our survey is concerned with a new food product, just introduced in Wichita, called Redi Wheat. This is a cooked whole wheat, in cans, which can be served as a vegetable, or used in meat loaf, or in various other ways.

1. Have you seen or heard anything at all about this new product called Redi Wheat? (If no, skip to Q. 7)

2. Have you purchased any Redi Wheat?  
(If yes) -- I see, thank you very much. Since you have bought it, we will not ask you any further questions over the phone. We would like to talk personally with homemakers who have bought Redi Wheat, to find out how they used it and how they liked it. One of our interviewers will be in your neighborhood in the near future and will call at your home. Are there any times of the day that she should come? (Note) I see, and your name is? \_\_\_\_\_. (If no, go on to 3a.)

3a. How did you hear about Redi Wheat? \_\_\_\_\_

b. (If not mentioned above - ask) Have you also seen of it in - - -

_____ newspaper story	_____ on television	_____ from friend or
_____ newspaper ad	_____ in store demo.	_____ acquaintance
_____ on radio	_____ on store shelf	_____ given recipe
		_____ booklet in store

4. Do you plan to purchase any Redi Wheat?
5. What kind of food do you think that Redi Wheat is? I mean, what is it like?  
\_\_\_\_\_
- 6a. Do you know how much it costs per can? \_\_\_\_\_
- b. (If "yes") Considering the cost of food nowadays, does this price seem to be in line? \_\_\_\_\_

All Respondents

7. About how often do you serve - - -

white potatoes \_\_\_\_\_

rice \_\_\_\_\_

macaroni or spaghetti \_\_\_\_\_

baked beans \_\_\_\_\_

Now, we would like to ask you just a few more questions about your household, these will be used only in summarizing the information you have given, by different sizes and types of families.

- 8a. How many persons are now living and eating together in your household?  
\_\_\_\_\_
- b. How many of these persons are not members of your family? \_\_\_\_\_
9. How many of the persons in your household are under 18 years of age? \_\_\_\_\_
10. What is the highest grade of school completed by the head of the household?  
\_\_\_\_\_
11. About how much do you and your family spend each week on food including your milk bill? Include all food whether eaten at home or away from home.  
\_\_\_\_\_
12. What was the total income received by all of the members of your family added together for 1960, that is the total income before taxes received from all sources, wages, salaries, businesses, investments, pensions, unemployment compensation, social security, and the like? \_\_\_\_\_

Household Interview

Hello, I am from the United States Department of Agriculture. May I speak with (name of food purchaser).

Hello, my name is \_\_\_\_\_. I am from the United States Department of Agriculture. We talked with you recently on the telephone and you told us that you had purchased some of the new food called Redi Wheat.

1. Is this the product that you purchased? (show labels)  
(If no) What product were you thinking of?
2. (If yes) How did you find out about Redi Wheat?  
(If not mentioned above) Did you also happen to see or hear anything about it in - - -  
\_\_\_\_ newspaper story                      \_\_\_\_ television                      \_\_\_\_ from friend or  
\_\_\_\_ newspaper ad                          \_\_\_\_ store demo.                          acquaintance  
\_\_\_\_ radio                                      \_\_\_\_ on store shelf                      \_\_\_\_ given recipe booklet
3. What would you say were the main reasons that you first purchased Redi Wheat?
4. Before you purchased, did you notice that there was both a seasoned and an unseasoned Redi Wheat? (If no) Did you notice before you used?
5. What kind of Redi Wheat have you purchased?  
                  seasoned only,                      unseasoned only,                      both
6. Have you used any of it yet? (If no) skip to Q. 25) which kind did you use?  
                  seasoned only,                      unseasoned only,                      both
7. How many times have you purchased Redi Wheat? (If more than once - enter the number of times purchased) What would you say were the main reasons that you purchased it again? (If once only) What were the reasons that you did not buy it again?
8. Regardless of which kind you purchased, if only one kind were available, would you prefer - a seasoned only - unseasoned only - does not matter. Why do you say that?
9. About how much did it cost you per can?
10. Considering the cost of food nowadays, does this price seem to be in line?
11. How about the size of the can - how many servings did you get from one can?
12. Is that about the right size for your household, or would you prefer a larger or smaller can?
13. Did you use the whole can the first time or did you have some leftover? (If respondent had leftovers) Did you have any difficulty in keeping the leftover Redi Wheat fresh until you used it again? How many days did you keep it until you used it? Where did you keep it?

14. Incidentally, where did you buy the Redi Wheat? I mean at what store (get name and location of store)
- 

If respondent has used both kinds of Redi Wheat prepare a second questionnaire. Ask each question 15 through 26 for both types of Redi Wheat.

---

---

This questionnaire is for seasoned, unseasoned,

---

15. In general, what do you think of Redi Wheat?
16. Is there anything (else) that you like about it?
17. Is there anything (else) that you do not like about it?
- 18a. How about the rest of the family, what do they think of Redi Wheat?
- b. (If there was anyone who did not like it) Who was that? What ages are they? What was it that they did not like about Redi Wheat?
- 
- 

This questionnaire is for seasoned - unseasoned

---

19. In what ways have you used or served Redi Wheat? (ask for each use)
- as a separate side dish in place of potatoes or rice
  - as a separate vegetable
  - as a meat extender in meat loaf or meatballs
  - in a casserole
  - in a salad
  - other (specify)
20. What did you think of it in this dish?
21. Did you use it in place of something else in this dish? (if yes) what?
22. Now, we would like you to compare Redi Wheat with some other foods. In general, would you say that Redi Wheat is
- |                              |                    |                         |
|------------------------------|--------------------|-------------------------|
| better than,                 | about the same as, | not as good as          |
| white potatoes               | - rice             | - macaroni or spaghetti |
| - baked beans - in terms of: |                    |                         |
| cost per serving             |                    |                         |
| variety of uses              |                    |                         |
| ease of preparation          |                    |                         |
| family preference            |                    |                         |

23. Incidentally, about how often do you serve white potatoes, rice, macaroni or spaghetti, baked beans -

every day

three or four times a week

once or twice a week

once or twice a month

less often \_\_\_\_\_

never serve \_\_\_\_\_

24. Do you think that you will continue to serve Redi Wheat or not? (If no or not sure) why is that? (If price is mentioned) at what price would you buy it? (If price is not mentioned) at what price might you buy more? (go to Q. 26)

Yes - sure About how often do you think that you would like to serve it to your household? Are there any new ways in which you plan to serve it? (specify ways) Are there any ways in which you will not serve it again? (specify ways) (If yes) why is that?

---

This questionnaire is for    seasoned - unseasoned

---

25. (If yes in 24) Would you purchase more Redi Wheat if it cost less per can? (If yes) At what price would you purchase?

---

IF BOTH TYPES OF REDI WHEAT WERE USED - - - ASK

---

26. In general, how would you rate the seasoned Redi Wheat with the unseasoned - In terms of -- taste, variety or number of uses, other (specify)

the unseasoned is    better                      than the seasoned

about the same

not as good

Now, we would like to ask you just a few more questions about your household. These will be used only in summarizing the information you have given, by different sizes and types of families.

27a. How many persons are there now living and eating together in your household?

b. How many of these persons are not members of your family?

28. How many of the persons in your household are under 18 years of age?

29. What was the highest grade of school completed by the head of the household?

30. About how much do you and your family spend each week on food, including your milk bill? Include all food whether eaten at home or away from home.

31. What was your total income received in your household in 1960; that is the total income before taxes, received by all members of your household from all sources, wages and salaries, business investments, pensions, Social Security, and the like?

Telephone Follow-up Interview

Hello, my name is \_\_\_\_\_. I am with the United States Department of Agriculture. May I speak with (name or with person in your household who is primarily responsible for buying and cooking the food).

Hello, my name is \_\_\_\_\_. I am with the United States Department of Agriculture. We recently spoke with you about a new food product called Redi Wheat, and you told us that you had (or had not) purchased it.

1. (For those who had not purchased) Have you purchased any Redi Wheat since we last talked with you?

(If no)  
(Terminate interview)

(If yes) How many times have you purchased it?  
(skip to Q. 3)

2. (For those who had purchased) Disregarding what you reported before, can you tell us the total number of times that you have purchased Redi Wheat?

3. What kinds of Redi Wheat have you purchased?

4. (If "both") Which kind have you purchased more of, the seasoned or the unseasoned?

5. (If "both") If only one kind were available, which kind would you prefer?

Thank you for your information.

APPENDIX C - RESTAURANT SURVEY

Tables

Table 53.--Replies to the question: "What were the number of customers that you served last week?"

Replies	Purchasers	Aware nonpurchasers
	Percent	Percent
Less than 1,000 persons.....	9	11
1,000 - 1,999 persons.....	18	17
2,000 - 2,999 persons.....	13	17
3,000 - 4,999 persons.....	29	20
5,000 - 6,999 persons.....	7	2
7,000 - 9,999 persons.....	11	---
10,000 persons and over.....	7	---
Not ascertained.....	6	33
Total.....	100	100
Number of restaurants.....	45	46



Table 54.--Highest and lowest priced dinner, platter, or item served by respondent's restaurant

Replies	Purchasers	Aware nonpurchasers
	<u>Percent</u>	<u>Percent</u>
<u>Highest priced item</u>		
Less than \$1.00.....	11	45
\$1.00 - \$1.49.....	22	15
\$1.50 - \$1.99.....	20	11
\$2.00 - \$2.99.....	18	9
\$3.00 - \$4.99.....	16	9
\$5.00 and over.....	13	2
Not ascertained.....	---	9
Total.....	100	100
<u>Lowest priced item</u>		
Less than 50¢.....	13	32
50¢ - 99¢.....	40	46
\$1.00 - \$1.49.....	25	9
\$1.50 - \$1.99.....	20	---
\$2.00 and over.....	2	4
Not ascertained.....	---	9
Total.....	100	100
Number of restaurants.....	45	46

Table 55.--1960 gross food sales for sample restaurants

1960 gross food sales	Purchasers	Aware nonpurchasers
	<u>Percent</u>	<u>Percent</u>
Less than \$25,000.....	2	26
\$25,000 - \$99,999.....	42	41
\$100,000 and over.....	40	11
Not ascertained.....	16	22
Total.....	100	100
Number of restaurants.....	45	46

Table 56.--Type of restaurant 1/

Type of restaurant	Purchasers	Aware nonpurchasers
	<u>Percent</u>	<u>Percent</u>
Hotel dining room.....	9	2
Restaurant (general type).....	53	20
Restaurant (specialty type).....	9	13
Cafeteria.....	11	2
Restaurant (counter type).....	11	37
Lunch counter, drive-ins.....	7	24
Other.....	---	2
Total.....	100	100
Number of restaurants.....	45	46

1/ Restaurants were classified as those eating establishments which offered regular dinners. They were further sub-classified by whether they offered primarily table service or counter service, and whether they generally served American foods or foreign specialties, e.g., Italian, French, etc. Lunch counters, "drive-ins," etc. were those establishments serving short orders only.

Table 57.--Replies to the question: "Which accounts for the largest part of your evening meal?"

Replies	Purchasers	Aware nonpurchasers
	<u>Percent</u>	<u>Percent</u>
Complete dinners or suppers.....	58	28
Platters or plate meals.....	11	15
A la carte items.....	29	50
Not ascertained.....	2	7
Total.....	100	100
Number of restaurants.....	45	46

Table 58.--Replies to the question: "What part of the day are you open?"

Replies	Purchasers	Aware nonpurchasers
	<u>Percent</u>	<u>Percent</u>
Day only.....	9	22
Day and evening.....	71	54
24 hours a day.....	16	17
Evenings only.....	4	7
Total.....	100	100
Number of restaurants.....	45	46

Table 59.--Type of meals offered in sample restaurants

Type of meals offered	Purchasers	Aware nonpurchasers
	<u>Percent</u>	<u>Percent</u>
Complete dinners.....	84	59
Platters or plate meals.....	84	67
A la carte items.....	100	96
Not ascertained.....	---	2
Number of restaurants.....	45	46

Questionnaire

: \_\_\_\_\_ :  
: With the exception of check-box material, office-record infor- :  
: mation, and free answer space, the questionnaire used for the study :  
: is reproduced below in its entirety. :  
: \_\_\_\_\_ :

Budget Bureau No. 40-6125  
Approval Expires 6-30-61

REDI WHEAT MARKET TEST

RESTAURANT QUESTIONNAIRE

How do you do, I am \_\_\_\_\_ from the United States Department of Agriculture. We are taking a survey of eating places in the Wichita area to determine their use of, and their customer's reaction to, a new food product. The product with which we are concerned is a new canned wheat called Redi Wheat.

1. Have you - been contacted by a wholesale food distributor and asked to purchase Redi Wheat? (If "no") - Were you told about this new product by the Kansas Restaurant Association? (If "no," skip to Q. 21)
2. Did you purchase any Redi Wheat? (If "no," skip to Q. 21)
3. Have you used Redi Wheat yet? (If "no," skip to Q. 20)
4. How many times have you purchased Redi Wheat? More than once (enter the number of times purchased) What would you say were the principal reasons that you purchased it again? Once only - What were the reasons that you did not buy it again?
5. In general, what do you think of Redi Wheat?
6. Is there anything (else) that you like about it - or about using it?
7. Is there anything (else) that you do not like about it - or about using it?
8. How about the size of the can - how many servings did you get from one can?
9. Is that about the right size for your needs, or would you prefer a larger or smaller can?
10. Did you use the whole can the first time or did you have some left over? Did you have any difficulty in keeping the leftover Redi Wheat fresh until you used it again? How many days did you keep it until you used the rest? Where did you keep it?
11. In what ways have you used or served Redi Wheat? (Ask for each use)  
    \_\_\_ as a separate side dish in place of potatoes or rice  
    \_\_\_ as a separate vegetable  
    \_\_\_ as a meat extender in meat loaf or meatballs

- \_\_\_ in a casserole
- \_\_\_ in a stuffing
- \_\_\_ in a salad
- \_\_\_ other (specify)

13. What was the reaction of most of your customers to this dish?  
very good, good, indifferent, poor, don't know
14. Was there anything that you liked about Redi Wheat or about using Redi Wheat in this dish?
15. Was there anything that you did not like about Redi Wheat or about using Redi Wheat in this dish?
16. Did you use Redi Wheat in the place of something else in this dish? (If yes - What?)
17. Now, we would like you to rate Redi Wheat with some other foods. Would you say that Redi Wheat is: Better than, about the same, not as good as -  
white potatoes - rice - macaroni or spaghetti - baked beans - in terms of:  
cost per serving  
variety of uses  
ease of preparation
18. Do you think that you will continue to serve Redi Wheat? (If "no" or "not sure") Why is that? (If price is mentioned) At what price would you buy? (If price is not mentioned) At what price might you consider buying more? (Go to Q. 20) Yes - About how often do you think you will serve it? Are there any new ways in which you plan to serve it? (specify ways) Are there any ways in which you will not serve it again? (specify ways) Why is that?
19. (If "yes" in Q. 18) Would you purchase more Redi Wheat if it cost less per can? (If "yes") At what price would you purchase?
20. Is there anything you can think of that would improve Redi Wheat?
21. Type of Establishment  
Hotel dining room  
coffee shop  
Restaurant (primarily booth or table service)  
general type  
specialty type (list type of specialty) e.g., Italian, Chinese, etc.  
Restaurant (primarily counter type, e.g., diner, etc.)  
Cafeteria  
Lunch counter  
Other (specify)

22. What were the number of customers that you served last week?
23. What part of the day are you open? day only, day and evening, 24 hrs. a day
24. Do you offer - Complete dinners or suppers? (Enter lunch or breakfast if not open other hours) Platter or plate meals? A la carte items?
25. Which type of meal accounts for the largest part of your evening business? Complete dinners or suppers? (Enter lunch or breakfast, if not open other hours) A la carte items? Platter or plate meal?
26. (For that type of meal or item, checked above, which constitutes the major part of the evening business - inspect the evening menu - or ask - - -) What is the: Highest priced dinner, platter or item? Lowest priced dinner, platter or item?
27. What is your estimate of your gross food sales for 1960? Do not include sales of wine or beer. (Hand respondent card)



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